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## A Method of Hermetically and Antiseptically Sealing Apical Ends of Root Canals.

By DR. H. D. BOYD, Troy, Ala.

In the report of the discussion on filling root canals, before the New Jersey State Dental Society, in the December ITEMS OF INTEREST, Dr. Flagg in upholding the merits of cotton, makes such broad claims for his favorite, that I cannot help but take issue with him. I wish to say in the beginning however, that Dr. Flagg's standing is so far above my own that ordinarily I would discard any method I might have, no matter how successful it had proved, and adopt what he said as gospel. In this case, however, I cannot but agree with Dr. Smith in the hope that some more scientific method than Dr. Flagg's "cotton field" can be discovered, nor can I resist the impulse to modestly express the belief that I have a method which is at least better than cotton.

As Dr. Flagg does, I also employ the Callahan method of sulphuric acid, soda solution and water in cleaning the canal. After this I dry the canal thoroughly, and as a test of dryness I use a suggestion for which I am indebted to Dr. Young, of Anniston, Ala., of passing a wisp of cotton on the smallest broach possible as far into the canal as it will go, and after withdrawing, rub this on the dam. If there is any moisture in the canal, the cotton will make a damp mark on the dam. Being assured that the canal is dry, I take a fresh wisp of cotton on a small broach, dip it in pure beechwood creosote and saturate the canal thoroughly. Then take cotton and broach and remove all excess of creosote, not trying to remove any from vicinity of apex. The canal is now ready for the hermetic sealing, which is accomplished as follows:

### **Aristol and Creosote in Root Canals.**

Place a sufficient quantity of aristol—from three to five grains—on cement slab. Dip spatula into pure wood creosote, and mix creosote and aristol as you would cement. That makes a very sticky mess, which can be made into any desired con-

sistency by employment of more or less aristol as desired. After getting the mass as stiff as possible, clean spatula and put fresh quantity of aristol on clean portion of slab. Drop the mass into this and by moving spatula backward and forward with gentle pressure roll into a cone of the right size for the canal in question. By this means, you can make in one minute's time a cone of the same consistency as a gutta percha point, and as small as a hair if required.

When the cone is prepared, take a pair of pliers (I find the style sold as "college pliers" will reach into canals best), and take up the cone by the larger end and push into canal. There is no difficulty to get a cone prepared in this manner clear to the apex, and the little excess of creosote which is necessarily left there will keep any of it from passing. When you have the apex of your cone at the apical end of the canal, take a straight canal instrument and press on its base. This forces the mass up into the canal, after which cement or gutta percha may be inserted according to preference of operator, and who can deny that the canal is "hermetically and antiseptically filled?" If any difficulty is experienced in sliding the cone to place, dip it in dry aristol and try again, when it will go right up.

This plan was suggested to me by the preparation which the White's used to sell, containing equal parts of cassia and aristol. From that I began preparing it myself and found I could make a paste from the mixture, but I soon discarded the cassia for beechwood creosote.

**The Method  
in Roots of  
Diseased Teeth.**

Regarding this method, and in refutation of Dr. Flagg's statement that nothing is as good as cotton, I may say that I have been using it twelve months now and have not a single loss to report. In cases where a fistula is established, after washing out pus, I pump fifty per cent. sulphuric acid through fistula, after which I proceed exactly as stated above, and I have yet to see the first case of fistula which did not disappear almost immediately. I have had patients come in my office from out of town, with teeth sore and no fistula; and no time for treatment, and encouraged by my success with this method, I have made the canals thoroughly aseptic and unhesitatingly filled them as outlined above. After this I use a counter-irritant on the gum and give the patients capsicum pads, and so far all have reported that the soreness would rapidly disappear.

Before adopting this method, I lost many good nights rest worrying over some case of root filling, but since discovering its advantages, I repose with as clear a conscience as any infant.

I would not for the world claim that anything done by me is better, or even as good as the same thing done by Dr. Flagg, but I certainly



prefer my method to his in this instance. I leave it to the profession generally, and to Dr. B. Holly Smith in particular, since he expressed a hope to that effect, to decide whether my filling is not more scientific than Dr. Flagg's cotton. One of the advantages it has over cotton to my mind is this: To get cotton to the apex of a canal, you have first to get a broach there which, in many cases, owing to tortuous canals, is impossible, while with the creosote and aristol cone, no canal is too tortuous as the cone is flexible when inserted, though it does in time get as hard as crystal. In filling canal with enlarged apical ends, an excess of creosote at that point will cause the cone to soften or gum, and stop there, adhering closely to the walls of the canal.

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### Shall the Dentist Advertise?

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By WILLIAM W. BELCHER, D.D.S., Rochester, N. Y.

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In the wicked there's no vice  
Of which the saints have not a spice.—*Butler.*

The question whether or not a professional man shall advertise is not a new one. In the medical profession the position of the man who advertises in the public prints is well understood, but there is one difficulty under which our sister profession has not labored. The medical man has nothing to sell but his services; if, perchance, the physician constructed artificial limbs, crutches or eye glasses, the question would be a more troublesome one.

In dentistry the mechanical and professional are so closely interwoven that there seems little chance of their separation.

It is nice to be independent, to do business on a side street or in the top story of a lofty office building, and say, "if the public desire my services they may come where I am"; but are we doing our whole duty to the public?

In talking with some of the people who have patronized the dental parlors of our city, and who, after trying one quack have fallen into the hands of another, and finally come to me full of suspicion, with no confidence in mankind in general and dentists in particular, I have said to them: "There are dozens of men in this city who are giving honest and faithful services; why after you had one failure with the cheap man, did you not try one of them?" "Ah! but I am a comparative stranger and knew no dentists but those who advertise." What argument can be advanced to such a patient?

The question of advertising is one that must be decided on entering practice and to the average college graduate the question of immediate gain, or future gain with respectability, are trying ones; indeed, I have been surprised to learn from men who were full of years and honors that they at times had been tempted to throw down the gauntlet, enter the arena of low fees, fatten their bank account and clothe their family in fine linen.

The man who is seeking the road to wealth is misdirected when he chooses the dental profession. The average dentist lives well, spends freely, dies poor and in debt.

**Professional  
Advertising  
Defined.**

Should the young man just starting in practice advertise? I see no objection to his doing so in a professional manner. There are no such sticklers for the ethics of our profession as those to whom they have been but a bitter and grinding rule of conduct.

To have been heard of, if only once, is a great advantage with the new patient; the young man just commencing his career has a bitter realization of this fact, and while he is willing to conduct himself in a professional manner, feels the necessity of bringing his name before the public. He sincerely desires to live up to the code of ethics. But what would be advertising for him is ethical to the big fellow with a reputation who does not hesitate to see that his big cases are reported in full for the Sunday papers; at times they have been illustrated with wood cuts that could have come from no other source than the office of the operator.

Should the younger man desire to advertise his name and address in a select weekly, or church publication, which is not used by the quack, I can see no harm. Such advertising cannot be with any expectation of direct results; the effect is simply that the public becomes familiar with his calling, name and address; this is valuable to any man, whether running a grocery store or a dental office.

But stop with the name and address; do not even say "examinations free," and for heaven's sake keep out of the theater programmes and daily papers, for they are almost exclusively in the hands of the quacks, and for this reason the reputable man, feeling that there must be a dividing line between himself and the incompetent, refuses to advertise at all. I claim that if one city paper, of high standing, should make an effort to have a professional directory of medical and dental men, excluding the quacks and incompetents, society members exclusively, of accepted standing, each with name and address, it would be a good thing for the paper, the public and the profession.

**Professional  
Honor Better  
Than Wealth.**

Honor and glory are not nourishing, but to the true professional man dearer than wealth. Every man has two reputations; one among his professional brethren and one with the public. The first is most dear, but the latter brings his living and often we find a man with no professional standing who succeeds for a time in deluding the public, to the benefit of his exchequer. Many of us in the dental profession are woefully lacking in business principles, and perhaps the advertising dentist is better endowed than his fellows, but the advancement of dentistry has not come through the advertising offices; they are simply parasites, who live on the work of others, pulling them down by defrauding the public; they contribute nothing to the upbuilding or advancement of the profession or the investigation of new problems.

The man who advertises a "dental parlor," who decorates his office with valuable (?) oil paintings or advertises superiority over all his fellows, is to be avoided; likewise, the man who advertises cheapness, for if his services were worth more he could command the higher fee.

When we consider the preliminary educational requirements, the time and money expended, the standing of dentistry as a profession is not to be despised nor to be lightly traded for a mess of pottage by lowering it and your *alma mater* by resorting to the tricks and wiles of trade.

"Be good and you will be lonesome," says the humorous writer, but the only permanent foundation of a dental practice is honesty and ability. A loud tooting of trumpets and bragging in the daily papers will perhaps bring more immediate results, but not a desirable nor appreciative clientele, and will in the end be less profitable than a practice conducted on a dignified and professional basis.

There are many better ways of advertising—clean hands and linen, clean clothing, clean breath, clean instruments, and a clean office with modern instruments, a delicate touch, neat and tasty stationery, all are great advertisers, as are attendance and assuming a leading part in church and society work.

**Advantages  
of Fraternal  
Association.**

Every man should join his local dental society and take an active part. This is one of the best ways to advertise. No man is sufficient unto himself; if he be a superior dentist he owes it to his profession to join the society and demonstrate his superiority; if he feels himself deficient he should join the society that he make himself more proficient by exchanging ideas and methods with his fellows. It is not claimed that all the able men of the profession are society members;

speed the day when this may be true; nor that every man who advertises in an unprofessional manner is incompetent, though this is true as a rule.

We have in our dental societies, men who compare well with their fellows in ability, honor and integrity, who have secured a practice by advertising with cuts of teeth and pictures, and after establishing a practice and not finding it necessary to continue advertising, apply to the society for membership.

What is your pleasure, gentlemen. Shall the man who has conducted himself in an unprofessional manner, join the societies on an equal footing with the young man who is just entering practice and trying to conduct himself in strict accord with the code of ethics? Will he not also conclude to advertise, and when he has secured a practice become a society member? If we expect him to follow the straight and narrow path, the reward of improper conduct should not be the too easy admittance in the society.

I am aware that the views herein expressed are not popular, but I believe they are based on common sense. "The name that dwells on every tongue no minstrel needs"; but there are other dentists who do need the minstrel, and while there may be no good excuse for their being, they, too, must live.

### Useful Hints for Daily Practice.

By L. F. DOLBEARE, M.D., Brooklyn, N. Y.

In dental practice, there are many small attentions, trifling in themselves, that impress your patients with the care and consideration you have for their comfort, and at the same time are of assistance in your work. Much has been written about the necessity of proper personal appearance, clean office and instruments, and neatness of operating—these are essentials, but to them add the following suggestions.

**Adjusting the Rubber Dam.** Do all your chiseling, grinding and separating, if possible before putting on the dam. Most persons do not fancy having on the rubber any longer than is absolutely necessary, and without it the coarse debris can be washed out, and afterwards you have not a soiled dam to work over. After cutting, or punching the requisite apertures for the exposed teeth, moisten them on the inner surface with soap.

The nicest method is to have in a small glass ointment jar a quantity

of Ivory paste, made by dissolving one and one-half ounces of Ivory soap in one pint of hot water. Many a troublesome adjustment may be avoided by this simple expedient. When in position, anoint the lips with white vaseline and place a napkin under the rubber; the patient is thus as comfortable as possible.

**Preparation  
of Cavities.**

Carefully dry the teeth with bibulous paper and the hot air syringe. The cavities with their fissures and defective walls are rendered more clearly discernible by this method. Cut away such tooth substance as is required to give you solid walls and healthy structure with large burs and carborundum wheels. Do not waste your time and your patron's patience by needless "puttering."

The subsequent preparation of cavity can then be determined upon as the case requires. Wiping out the prepared cavity with a solution of dried Canada balsam in chloroform sometimes facilitates the first steps of gold filling.

**Separating  
Plaster Casts.**

To prevent the adhesion of plaster models from impressions, or in flasking, no better preparation can be used than ethereal antiseptic soap (Johnston's). This seems to be a solution of Castile soap and ether, and is much cleaner than oil or silex. It can be employed on plaster that has just set without fear of the next batch adhering.

**Mouth Wash.**

For mouth washing during dental operations, there is nothing to be preferred to thycalol. The manufacture of this article embraces all that is to be desired for an ideal mouth wash. It is effective, elegant and convenient. A small quantity in a glass of tepid water answers all purposes, and leaves a delightful, refreshing taste in the mouth that no other compound seems to possess.

After the removal of salivary calculus and the polishing of the teeth, brushing the gums and teeth with a pledget of cotton saturated with pyrozone (a permanent 3 per cent. solution of hydrogen peroxide) will complete the operation and insure the best results for personal appearance and comfort.



# SOCIETY PAPERS

## An Appeal to Congress Against Dental Patents.

*Read at the Annual Meeting of N. Y. State Society, May, 1897, as the report of the Correspondent, R. Ottolengui, M.D.S.*

It has been my effort in the past, each year to bring before the society, in my report as Correspondent, some subject of such general interest to the profession that I might be able, by communicating with other dentists throughout the country, to give you a compiled expression of opinions of a great number of men.

In casting about for a subject for this year, it occurred to me that there is one magnificent opportunity for our society to initiate a movement which might ultimately redound to the benefit of the entire dental world. With this end in view, I sent the following letter to presidents of all the state dental societies in the United States:

MY DEAR DOCTOR:

As correspondent of the New York State Dental Society, it is my duty each year to correspond with prominent members of the profession in relation to some matter of interest to us all. This year I have decided to bring before our society a matter which I think is of vital interest to the profession, and to suggest a movement which I believe can be successfully accomplished if we can win the co-operation of all the State Dental Societies.

I send you with this a copy of the March number of ITEMS OF INTEREST, and beg that you read carefully my editorial therein. You will find a suggestion for a petition to Congress for an act in restraint of the granting of patents upon any method of treating human diseases, which, of course, would include all dental operations.

Will you kindly give the matter your consideration, and write me your opinion of the advisability of undertaking this project, and also let me know whether your society can be counted on to co-operate in the movement? My present idea is, that all state societies could appoint a committee whose duty it would be to bring to bear the influence of the profession in its own state upon the congressmen and senators when the bill is finally formulated.

I will ask our State Society to appoint such a committee, and I will read, as my report at our next meeting, the replies which I receive from yourself and the presidents of the various State Societies, to whom I am addressing a letter similar to this one.

I shall be indebted if you will let me hear from you at your earliest convenience, as our meeting is not very far off, and I shall require some time after receiving the replies to compile the report."

Allusion is made in the above circular letter to an editorial upon the subject of patents, which appeared in *ITEMS OF INTEREST*. This editorial was purposely written in aid of the project which I expect at this time to introduce to your serious attention. It is unnecessary to quote the editorial, but it will aid those who have not read it to a better comprehension of the appended correspondence if I should give a very brief synopsis of the main features of the argument. It was pointed out that a troublous question for professional men has always been that of copyright and patent. In order to encourage progress, both patents and copyright should be conceded as the just right of a professional as of any other man. Moreover, it is for the interest of the entire profession that copyright and patents should be granted, because without such governmental protection neither publisher nor manufacturer will risk capital in the experiment of a new venture, and these men upon whom the author or inventor must depend for the full distribution of his achievement are not subservient to codes of ethics, but are guided solely by commercial instincts, which are both legal and moral, even though they may be unprofessional. It was further pointed out, however, that there is one class of patents which should not be granted. No man should have the monopoly of a method of practice, and the legal right to collect tribute from all who undertake to make use of his patented method of treatment. If a man should write a book, let him obtain a copyright. The publisher demands it. If a man invent a tool, or implement, or any article which may be manufactured, and sold to all alike, let him obtain a patent. The manufacturer demands it. But let no man have the right to propound a doctrine, announce a formula, describe a procedure, and having done no more, sit in idleness and collect a license from all who dare to utilize his announced method. This was the gist of the editorial submitted with the circular letter.

In answer to the above, I have received replies from the presidents of thirty-two societies, which I append:

**Maine.** As far as I am personally concerned, I am in favor of sending a petition to Congress to restrain the granting of patents upon any method of treating human diseases. What I have said, I am quite sure will voice the sentiments of the Maine Dental Society. I will bring the subject before the society at our annual convention, the third Tuesday in July.

F. A. BURNHAM, President, Biddeford, Me.

## ITEMS OF INTEREST

**New Hampshire.** As for my own views, they coincide with the article in the *ITEMS OF INTEREST*, especially in regard to Congress taking some action to prevent patents being issued for methods of treatment.

I will do all I can to help the good cause, and am in hopes to send you the number that can be depended on in the State Society, if not the whole number of dentists in the state.

EDWIN C. BLAISDELL, D.M.D., Portsmouth, N. H.

**Vermont.** I will say that I agree with you in the position you take in your editorial in the March number of *ITEMS OF INTEREST*, which I have read, and should be glad to contribute my help in bringing about such legislation; and have no doubt that if you could secure the hearty and united support in your effort of both the dental and medical professions, it could be accomplished, or any other reasonable act or amendment of an act. I don't believe you can get what you desire by simply getting the various societies to pass resolutions and name a committee, but you must have the united and hearty support of the individual members of those professions named, as this legislation will meet with strong opposition backed by money and ability.

F. P. MATHER, ex-President, Chester, Vt.

**Massachusetts.** In the main I am in sympathy with your movement, seeking Congress to amend the patent laws relating to dentistry. I think, however, that there will be no incentive for any person to conceive or bring forward any remedy or invention for the preservation—were it possible—of human life unless a patent is granted, or the government recompenses the discoverer or inventor. In olden times, patents were granted for discoveries of, or in, new worlds or lands. In modern times, patents are granted on about everything new or original.

The matter stands practically as for any mechanical contrivance; there must be an incentive to bring forth, otherwise there will be a diminution in this line of activity. Now what incentive is there for most individuals? Money! You may say that individual is sordid, yet you cannot get away from the fact that it is a money consideration, a compensation.

Do individuals marry simply to propagate the world? You may say that is the chief end of life, but you know as well as I, that man, endowed by his Creator with certain passions, is bound to indulge; temperately he should, but intemperately he often will. It is the same in eating and drinking. Now were it not for such incentive for pleasure, would he do so as freely? Would there be that incentive for propagating the species? If so, why is he given those pleasurable emotions? I simply mention this, as it relates principally to life.

The incentive in this life is to get something, either in one form or another, to gratify our desires, be they what they may, high or low order, as the Creator has endowed. I am therefore willing that the inventor of a meritorious invention, method, or compound, should reap something commensurate with the time, toil, and perhaps money given in bringing



to light any discovery for the benefit of humanity—but how to control the same, is the question.

And why I believe this is right and just, is a conviction and knowledge derived from an experience extending through nearly the decade of 1870 to 1880, as a "patent solicitor and counsel in patent cases." From that practical experience I reached the conclusion that the inventor did not reap the benefits due to him after—in most cases—years in study, toil, and perhaps fortune in bringing to light something new, original, and beneficial; that the fact that ninety-nine patents of every hundred granted were worthless, or not worth the paper upon which they are printed; that ninety per cent. of the inventors derive comparatively nothing from patents granted to them.

If the invention has virtue, some influential and moneyed individual or corporation puts the inventor into a position where he has no alternative but to sell for a song; and then the corporation "shelves" the patent and the public loses any benefit to be derived.

This invention may be less complicated, cheaper to manufacture, and better for the public, yet the corporation having one on the market does not care to change its machinery for manufacturing the newer and better article, and therefore prevents the public having the benefits.

I would have patents so issued that the public could get the benefit of meritorious inventions, either by the European way or some other. By the European method, the inventor or assignee has to pay to the government an annual annuity to keep the patent alive, and the annuity increases each year during the term of said patent. If for any reason the owner of said patents fails to pay the annuity for a single year, the patent lapses and becomes public property. There is not then that desire to shelve a patent if the owner has to pay a stipulated annual annuity.

WALDO E. BOARDMAN, Boston, Mass.

**Rhode Island.** I can now say but little. The next meeting of our society is to be held in July.

Possibly the feeling of many dentists would be, that methods should not be patented; but when a man has given time and money to inventing an appliance or apparatus, he feels that he should get some remuneration for each piece of such apparatus manufactured.

I am in sympathy with your plan as set forth in your editorial in *ITEMS OF INTEREST*, March, 1897. Everything which is done for the attainment of health for the human race, should certainly have as little check upon it as possible.

E. P. ROBINSON, Newport, R. I.

**Connecticut.** I have read your editorial in the March *ITEMS*, and personally am heartily in favor of the plan you suggest, viz., of the profession uniting in a petition to Congress for an act in restraint of the granting of patents upon any method of treating human diseases.

Our annual meeting takes place on the third Tuesday in May, at which time I will have the subject brought up for discussion, and think without doubt the association will co-operate in the movement.

EDWARD PRENTIS, New London, Conn.

## ITEMS OF INTEREST

**New Jersey.**

I believe that no one has the right, if he has his profession and suffering humanity at heart, to restrict anything whereby his profession may be elevated, or suffering may be relieved.

Consider me in sympathy with the movement, and will do all I can to aid you.

Will make a point of this in my annual address before the State Dental Society of New Jersey, held at Atlantic City in July next.

HARVEY IREDELL, New Brunswick, N. J.

**Delaware.**

I am most certainly in favor of making all treatment of disease, including all dental operations of every description, free from any patent fees. But for the production of an improved instrument, or tool designed to be used in a laboratory or office, indirectly to the patient, I think it perfectly right and just that the product of a *professional* brain in that line should not suffer in competition with the same improvement emanating from one other than a professional.

I see no reason why a dentist should not patent a tool, or implement. Should he not, another not a dentist would take the same idea and patent it, making it cover other than dental or surgical operations.

I am not interested in any patents. I only believe in doing justice to all, while believing that there should be no hamper whatever put on treatment of disease.

C. R. JEFFERIS, Wilmington, Del.

**West Virginia.**

I have read the editorial to which you allude, and must say that I heartily agree with you in your ideas on this subject. I do not see how any one could wish to benefit his practice or increase his profits at the expense of his fellow-man's time, genius, and money devoted to some particular piece of mechanism that will make another's work easier or more perfect in construction.

I am not an inventor, which fact I regret, yet I am willing that the inventor be paid for his ingenuity, time, etc. But there is a great evil which begins right here: the inventor sells his invention to the manufacturing company, who control the same and charge exorbitant price for it, and the inventor, to whom we would gladly pay tribute, does not get a proportionate share. If this monopoly could be stopped, poor and rich would alike benefit by the inventor's skill. The patent on process should not be allowed, and the reasons you give are sufficient, so I will not enter into a discussion on that point.

I will gladly bring your subject before our society in October, and appoint a committee to see our representatives in favor of the proposed law.

ROBERT W. TENER, Wheeling, W. Va.

**Washington, D. C.**

I heartily favor any effort that has for its object the accomplishment of your suggestion. I am really opposed to the present method of putting a restriction upon the free use of any means which has for its object the relief of suffering humanity, and characterize same as modern cannibalism.

It would be difficult for me to say how our society will act upon the

suggestion, but I will refer it for action, and use my influence to obtain its co-operation.

D. E. WIBER, Washington, D. C.

**South Carolina.** I will bring the matter about which you write to the attention of the South Carolina State Dental Association, which meets July 20 next.

I am satisfied the South Carolina State Dental Association will indorse your effort, and will give their influence to have the act passed, forbidding patents on methods of treating human diseases.

G. B. WHITE, Chester, S. C.

**North Carolina.** As an individual I heartily indorse your proposition to petition Congress for a repeal of the law "granting of patents upon any method of treating human diseases."

Your editorial on this subject so fully accords with my own views, I shall not elaborate them here.

I am heartily in favor of such a law, and will take pleasure in bringing the matter up at our society meeting May 12-14, at Charlotte, N. C., and get an expression of the opinion of the society.

J. E. WYCHE, Greensboro, N. C.

**Georgia.** At the next meeting of the Georgia State Dental Society, which convenes June 8, I shall take pleasure in bringing the matter before the society for official action, and I have no doubt that it will prove favorable to your suggestions.

J. A. CHAPPLE, Atlanta, Ga.

**Alabama.** Referring to the matter of legislation you speak of, will say I shall be glad to bring it before our association, and request action on same in my address, and shall appoint a committee to act with similar committees from other societies, etc. I would be glad if you would indicate to me what you would like said upon the subject, so that I may bring it out clearly in my address. I certainly think it "advisable to undertake this project," and think you can count on the Alabama Dental Association to co-operate with you.

R. A. RUSH, Selma, Ala.

**Louisiana.** Personally, I am fully in accord with the movement you suggest, and will give my influence towards getting our society to give you their aid. I would like to see Congress pass such a law, prohibiting granting of patents upon treating human diseases, and trust every state in the Union will give it their support.

J. H. LANDRY, Plaquemine, La.

**Texas.** Individually, I heartily concur in the effort you are making, opposing patent methods of treating any human disease. The Texas Dental Association does not meet until May 19. I will then bring the matter before that body for action.

T. L. WESTERFIELD, Dallas, Tex.

**Indiana.** I have read your editorial with interest, and am confident that you have struck the keynote of the most disgrace, trouble, and annoyance to our profession; that is, to those who practice their profession as professional men.

I am heartily in sympathy with you, and will do what I can to aid in this work.

W. W. SHRYOCK, Fort Wayne, Ind.

**Illinois.** I am in sympathy with the movement, and will be pleased to do all I can for the question asking national aid in preventing the granting of patents upon any method of treating human diseases. I think you can count on the Illinois State Dental Society's aid in the matter.

C. R. TAYLOR, Streator, Ill.

**Kentucky.** I think the suggestion a good one, and heartily indorse the idea of such a petition, and believe with you, "if we can have the co-operation of the state societies, the movement can be successfully accomplished."

I shall take pleasure in presenting the matter to our society, which meets in June, and will recommend that a committee be appointed to look after the welfare of such movement. I think I can safely say for Kentucky State Dental Association, that it will not be backward in any matter which is of vital interest to the profession, or in any way looking to its advancement. And I will use my best endeavor to have it co-operate in the undertaking.

LEE F. HUFFMAN, Covington, Ky.

**Tennessee.** I think you are on the right line, and I will gladly put the matter before our state society, and do all I can to help the movement along. If you will kindly advise me just what you wish us to do in the matter, I shall endeavor to carry out your wishes.

W. D. BILLINGER, Chattanooga, Tenn.

**Wisconsin.** It certainly would be a good thing for the dentists to be freed any more Josiah Bacons and others of that ilk, but whether such a law as you suggest would have the desired effect, is to me a question yet to be answered. It would seem to me that the passage of such a law (could it be enforced) would have a tendency to restrict research and experiments in the direction of new methods, etc.; for all men are selfish, and the majority of men are incited to study and experiment, not for any honor there may be in success, but for the sake of pecuniary gain. There are exceptions to this rule, of course, but these only serve to emphasize the rule. It is a question which ought to be looked at from all sides, and to be decided only on mature deliberation.

I will endeavor to bring the subject before our society at its July meeting.

T. B. FLETCHER, Portage, Wis.

**Minnesota.** The proposed movement is one that I have had in mind for a long time, and had decided to make some recommendation along that line at our next state meeting, which will be held at Minneapolis next September. I think, without doubt, our association can be counted on to co-operate in the movement.

The proposition has my hearty support, and I shall be pleased to do anything that will help the movement along.

W. D. JAMES, Tracy, Minn.

**Missouri.** I am with you, and will do all I can. I will bring the matter before the state meeting in July. You will kindly inform me in regard to the matter, at any time you think I can be of benefit to the project.

D. F. ORR, Liberty, Mo.

**Kansas.** Your idea is a good one, and shall certainly have my co-operation. Will bring the subject before our association, which meets in May. You can rest assured Kansas will be for it.

J. P. ROOT, Kansas City, Kan.

**Arkansas.** I must say that although our society has not had an opportunity to express its sentiments in reference to patenting methods of treating teeth, or combination of medicines for that purpose, or for treating human diseases of any kind, I feel perfectly free to say that for my society you have its full indorsement in any efforts looking to the preventing of the issuance of such patents in the future. And I will authorize your state committee to act as our committee in the matter.

W. H. MARSHALL, Little Rock, Ark.

**South Dakota.** Being a member of the Dental Protective Association, it meets my views exactly. I have not corresponded with any other members of our state society, but will bring it before them at our June meeting. I believe there will be no difficulty in getting the co-operation of the society.

W. O. ROBINSON, Parker, S. D.

**Colorado.** I have no doubt but that the Colorado State Dental Association will be in hearty accord with your movement. We have our meeting in June, and will take action on the contents of your letter.

J. H. PARSONS, Boulder, Col.

**Oregon** I have read your article in ITEMS OF INTEREST, and fully indorse everything said therein with regard to dental patents. I think it covers the whole ground, and will as president of the Oregon State Dental Society do all I can, as well as in a personal way, to bring about the desired result.

I am personally acquainted with all of the Oregon delegation in Congress, and I have no doubt I can secure Oregon's vote favoring the passage of a bill looking to the end sought and desired by the best element in the profession.

G. H. CHANCE, Portland, Oregon.

**Utah.** Your article referred to indicates a proper spirit, and a movement toward gaining the point in view should receive general support from the dental profession. The question is one of considerable importance, as will be found later on, not only to dental practitioners but to suffering humanity. Just what the form of measure proposed and what its limitations, I can hardly imagine with my present light, but let me inform you that any measure having as its object the advancement of modern dentistry, a measure to benefit the whole people rather than the individual, will receive hearty indorsement from the Utah Dental Association. We, the people of this Western country, stand in as close touch with our representatives at Washington as you of its East, and in this movement we can surely expect as much from them. The principal obstacle will be found in the drafting of the measure. Where will its line be drawn? What shall be constituted legitimate patent rights? And what not? Who shall determine, and how?

There is no doubt in my mind whatsoever but that the creator of anything, whether a thought, method, or machine, should receive encouragement and sufficient remuneration for same. Nothing is obtained in this world without being bought, and while suffering humanity demands relief from arbitrary corporations, yet we must be sure that justice is done to the masses without discouragement to the individual genius who, by his superior thought, has made a creation. But this will all be adjusted before action is taken, and with justice and progress as its objective point, it will give me great pleasure to support, to the extent of my ability, concentrated action to gain this end.

A. B. DUNFORD, Salt Lake City, Utah.

**Washington, D. C.** Our society instructs me to say that at present they are compelled to decline your suggestions, upon the ground that they know of no patents allowable by our government upon any method of treating diseases, as far as they are informed, nothing but a process being patentable.

C. W. APPLER, Secretary, Washington, D. C.

It will be noted that two letters appear from the Washington City Society. In the first the president expresses approval of the scheme, and says that he will urge his society to support it. In the second the secretary of the society reports that the society has considered the matter and declines at present to support the scheme, upon the ground that they know of no law which permits the granting of such patents.

In this connection it will be of interest for me to report that I have a letter from a member of a prominent firm of patent lawyers in Washington, who writes in flattering terms of my editorial, but claims, as does the Washington society, that no such patent can be legal under the existing laws. It is therefore possible that some member of the Washington society communicated with these lawyers and then reported their views to the society, upon which they acted as above indicated. I have

had further communication with the lawyers, but as yet have no definite reply in which they quote authority for their position, though they have promised to do so.

Let us, however, for a moment suppose that their contention is correct. In brief, it is to the effect that "any patent granted upon a method of treating human disease would be declared invalid by a court of law." If this be true, then I argue the greater is the necessity for a specific statute which would prevent the granting of the patent. The burden of a legal testing of such patents should be removed from the medical and dental practitioner. It is unquestionably the fact that many patents have been granted which have enabled the holders thereof to exact a license for the privilege of utilizing the protected methods of practice; it is true that many such patents have been declared invalid when tested in court; and it is also true that the dental profession have been made to expend a large sum of money, as the reports of the Dental Protective Association amply prove, in order to have these unjust patents declared invalid. If the principle is correct, as announced by the Washington Dental Society and the Washington patent attorneys, that no patent upon a method of treating human disease is valid, then it is high time that the management of the Patent Office should be such that in the future no patents of this illegal character shall be issued.

That is the movement which I ask the New York State Dental Society to inaugurate, as it has inaugurated other dental legislation which has been copied throughout the breadth of this land, to the great advantage of dental science and the betterment of the whole people, who have been protected by the laws, which now exact a higher standard of dental education when granting licenses to practice. It is time that the United States should imitate the states and lend its protection to the professional rather than to the unprofessional practitioner.

Many movements in the dental world have had their inception, have received general indorsement, and have then gradually drifted into that realm which is the home of good resolutions, abandoned.

Desirous as I was to see our society inaugurate this great movement, I have felt that it would be futile to do so without some practical plan of procedure, which would at least offer a reasonable hope of success. For this reason I addressed all state dental societies through their presidents. You have heard the responses; these men pledge themselves to have this subject discussed at their summer meetings; many promise to have committees appointed to co-operate with us. It is probable that the first wave of impulse will be fruitful of good resolutions. How shall we take advantage of it? How shall we reach Congress, a more inaccessible body than a state legislature? It is a difficult problem, but it is not an im-

possible one. If our society will appoint a committee—a small one, not more than three members—I will pledge the services of my magazine. This is an immense work, and one which we could scarcely expect from committeemen. Through the journal pages the plan may be announced, and a systematic effort made to carry our point, the magazine offering its facilities as a sort of clearing-house for the many committees which I confidently believe will be appointed. If in the end the object can be attained; if in all the future we can promise to the dental fraternity immunity from the license sharks, the glory and the gratitude will be due to the New York State Dental Society. And believe me, gentleman, that is my first, my last, and my whole object in bringing this matter to your attention.

I claim membership in but two societies—my local society, the Second District Society, which we are proud to say has the largest membership of any local organization in the country, and to this our State Society, which is certainly one of the most important in the states. To them both I owe allegiance, and my constant aim is to serve them.





## Some Statistical Studies of Dental Education in the United States.

By DRS. L. ASHLEY FAUGHT and G. CARLETON BROWN.

*Read before the Central Dental Association of Northern New Jersey, November, 1897.*

The Bureau of Education at Washington, D. C., uses for the purposes of statistical comparison the geographical divisions of the United States, as adopted in the Eleventh Census. This thus established convenience has commended itself to us for use in our studies.

On the map, therefore, to which we now invite your attention, we have drawn lines marking out five divisions: The North Atlantic division, the South Atlantic division, the North Central division, the South Central division, and the Western division.

The North Atlantic division includes nine states: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania.

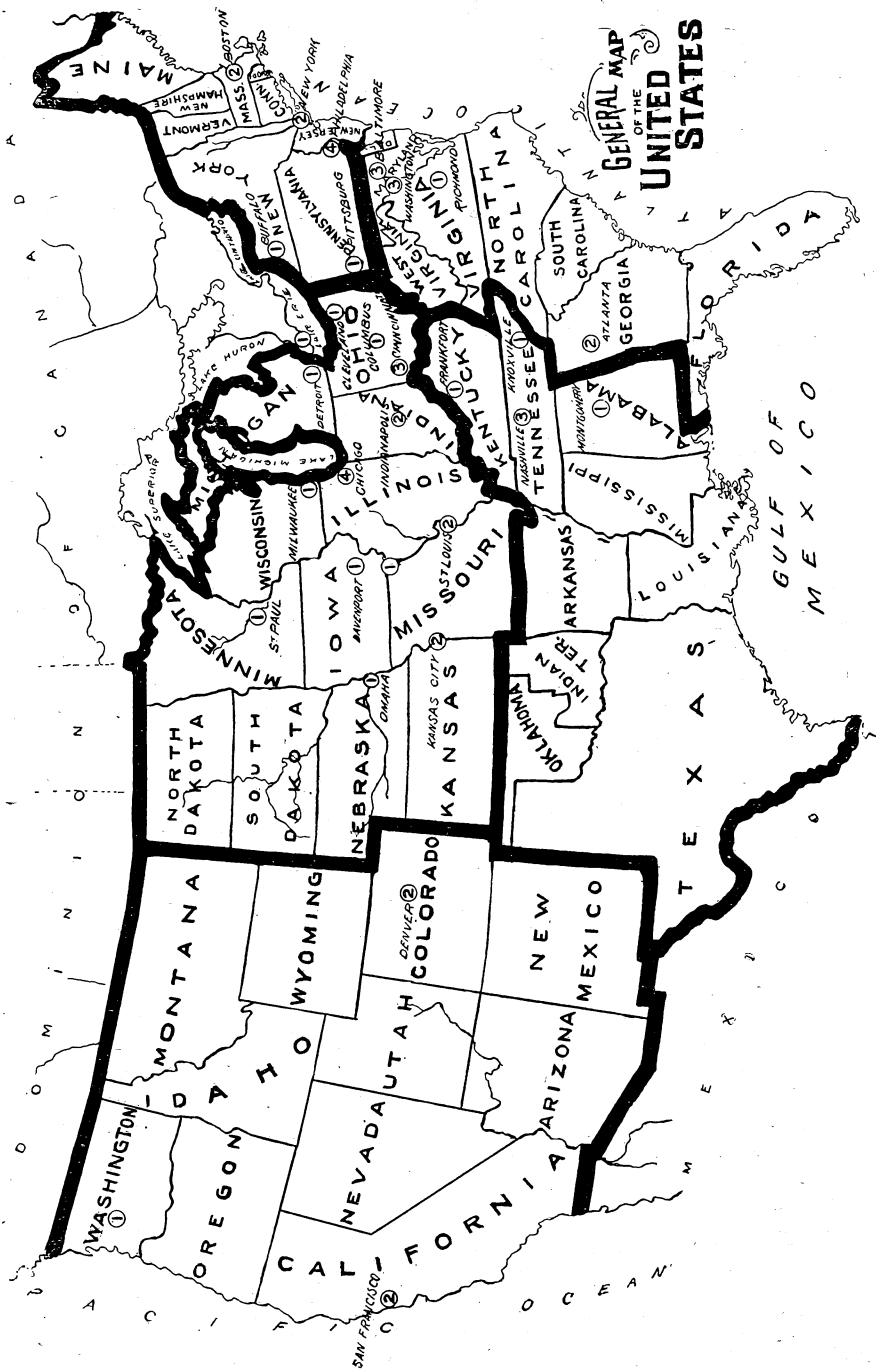
The South Atlantic division includes nine states: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida.

The North Central division includes twelve states: Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

The South Central division includes seven states and two territories: Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Arkansas, and Oklahoma and Indian Territories.

The Western division includes nine states and two territories: Montana, Wyoming, Colorado, Utah, Nevada, Idaho, Washington, Oregon, and California and the territories of New Mexico and Arizona.

The National Association of Dental Examiners, through its Committee on Colleges indicates to the component boards of that association the colleges which this committee finds upon investigation to meet the standards and requirements compiled by the representatives of these boards. This indication has in the past been accomplished by listing these colleges under the term "recognized," leaving the individual boards to determine for themselves the question of eligibility of any candidate for registration or for examination. When this term "recognized" is used by us, it is used only in accordance with the meaning given in this explanation.



In the North Atlantic Division there are 10 dental colleges, of which 8 are recognized by the N. A. D. Ex.

" South	"	"	9	"	"	8	"	"	"	"
" North Central	"	"	22	"	"	16	"	"	"	"
" South	"	"	6	"	"	6	"	"	"	"
" Western	"	"	5	"	"	2	"	"	"	"
Total,			52			40				

Six thousand five hundred and seven students of dentistry were reported to the committee on colleges of the National Association of Dental Examiners as being in actual attendance upon the dental colleges in the United States during the session of 1896-'97. An analysis of the distribution of these students shows the following:

North Atlantic. South Atlantic. North Central. South Central. Western.

191	214	463	71	158
131	55	96	160	28
...	...	77	...	...
248	40	521	17	47
326	78	183	170	27
415	210	103	40	10
366	29	101	16	...
199	210	57	...	...
45	22	211	...	...
111	43	178	...	...
...	...	194	...	...
...	...	172	...	...
...	...	81	...	...
...	...	109	...	...
...	...	69	...	...
...	...	61	...	...
...	...	76	...	...
...	...	69	...	...
...	...	9	...	...
2,032	901	2,830	474	270

Therefore of the six thousand five hundred and seven students, nearly three-fourths of them attended the colleges in the North Atlantic and North Central divisions. The North Atlantic division with ten colleges having nearly as many students (within 798) as the North Central division with its twenty-two colleges. It is fair to presume that a college with less than one hundred students must find its maintenance a serious question. Of the North Atlantic division, only *one* college may be thus said to have a precarious existence. Of the South Atlantic division, *six* may be considered to be in this condition; of the North Central, *nine*; of the South Central, *four*; of the Western, *four*. In other words, only twenty-eight of the colleges have classes exceeding one hundred students. On this basis, twenty-four have not demonstrated their need to exist.

Let us now consider the relationship of the colleges in the several divisions, as compared one with another in the same group—and this is by far the most equitable way to study relationship—for where location and climate, etc., are similar, the conditions of existence with which they have to contend must be more nearly similar. The supposition being true that the educational facilities offered, are equal; and the purpose to be attained—the proper and thorough education of persons for the practice of dentistry—exactly the same with each college; and these two features we believe the colleges themselves claim to be true (*vide* announcement) the mean attendance in each of the colleges in the North Atlantic division should be 225. Five, however, fail to reach this quota. In the South Atlantic, the mean is 100, six colleges not averaging. In the North Central the mean is 149, twelve not averaging; in the South Central the mean is 79, four not averaging; and in the Western the mean is 54, four not averaging. According to this method of comparison, thirty-one colleges have not demonstrated their need to exist.

Now let us for a moment consider the extent of territory included in these divisions. Carefully placing under the head of each division the square miles of its respective states and territories, and then securing the sum total in each, we obtain the following:

North Atlantic.	South Atlantic.	North Central.	South Central.	Western.
Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.
211,379	277,302	868,135	496,998	1,173,664

Colleges:

10

9

22

6

5

Little necessity would thus appear to exist for any of the population in such vast expanses to travel outside of their own geographical division in search of an education in dentistry, unless it be a necessity with the Western; but it is at once apparent upon consulting the list of matriculants as published in any college announcement, that a flow of students does occur from one division to another.

Let us study this flow for a moment, as shown by the announcements for 1896-'97. The figures used represent the number of students given as coming to the divisions named, from states located in a division other than that division in which the college is located. Note is only taken of the United States.

North Atlantic.	South Atlantic.	North Central.	South Central.	Western.
184	382	226	136	19

Comparing these numbers with the respective total members educated in each division, the following appears:

North Atlantic. South Atlantic. North Central. South Central. Western.

Total..2,032	901	2,830	474	270
Flow.. 184	382	226	136	19

Therefore

Of students in N. A. very nearly 1-11 came from outside the division.

" " S. A. considerably over  $\frac{1}{3}$  came from outside the division.

" " N. C. almost 1-12 came from outside the division.

" " S. C. nearly  $\frac{1}{3}$  came from outside the division.

" " W. very nearly 1-14 came from outside the division.

In any analysis of this flow to a division from outside of it several elements must be taken into consideration. First and foremost should be the possibility that students drawn from a contiguous State, although coming from territory belonging to another division, would still somewhat naturally go to the nearest college, and in a measure this is to be expected and allowed, when the college to which they go is located quite near to the boundary of that contiguous State, that is:

Students.

For Denver, allow students from Kansas, Nebraska, Oklahoma..	= 1
For Cincinnati, allow students from Kentucky.....	= 2
For Louisville, allow students from Indiana.....	= 9
For Pittsburgh, allow students from Ohio and West Virginia....	= 9
For Philadelphia, allow students from Delaware and Maryland..	= 19
For Baltimore, allow students from Pennsylvania.....	= 50
For Knoxville, allow students from North Carolina.....	= 3
For Atlanta, allow students from Alabama.....	= 39
For Birmingham, allow students from Georgia.....	= 2

Next to be considered as to be allowed, would be the number of students attracted to a division by reason of lower than usual fees. In those institutions where the fee falls much below \$325 to graduate, the attraction is assumed, and in these one-half of the number of students coming from points outside the division are allowed. This appears to be true of some colleges in the South Atlantic division, and the number allowed is fourteen; in the North Central division, and the number allowed is sixteen; in the South Central division, and the number allowed is ten; in the Western Central division, and the number allowed is seven.

The total deductions, therefore, to be made are:

From the North Atlantic.....	28
From the South Atlantic .....	103
From the North Central .....	37
From the South Central .....	24
From the Western .....	8

This makes the figures as compared with full attendance:

North Atlantic.	South Atlantic.	North Central.	South Central.	Western.
2,032	901	2,830	474	270 Total.
156	279	189	112	11 Flow.

Consequently

- Of students in N. A. nearly 1-13 came from outside the division.  
 " " S. A. nearly  $\frac{1}{3}$  came from outside the division.  
 " " N. C. over 1-15 came from outside the division.  
 " " S. C. nearly  $\frac{1}{4}$  came from outside the division.  
 " " W. a little more than 1-25 came from outside the division.

At this point in our inquiry it appeared desirable to determine the source of the greatest flow, the direction of it, and the amount of it. These points the following table will show:

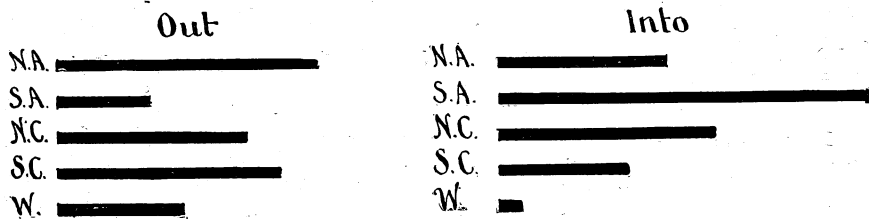
North Atlantic to South Atlantic divisions.....	186
"    " North Central divisions .....	80
"    " South Central divisions .....	10
"    " Western divisions .....	6
South Atlantic to North Atlantic divisions .....	46
"    " North Central divisions .....	15
"    " South Central divisions .....	39
"    " Western divisions .....	0
"    " North Central divisions .....	80
"    " South Atlantic divisions .....	34
"    " South Central divisions .....	80
"    " Western divisions .....	11
South Central to North Atlantic divisions .....	13
"    " South Atlantic divisions .....	151
"    " North Central divisions .....	63
"    " Western divisions .....	2
Western to North Atlantic divisions .....	40
"    " South Atlantic divisions .....	11
"    " North Central divisions .....	68
"    " South Central divisions .....	7

It is clearly shown that there was a decided flow of students to the South Atlantic division, the greater portion of which came from the North Atlantic and South Central divisions; in one of which, the North Atlantic, as we shall shortly show to you, is located the greatest dental educational center in the United States. While in the foregoing portion of these remarks, for the sake of securing statistical knowledge, we made allowances in the amount of the general flow on account of two supposed materially affecting conditions, yet the diminution on their account was not sufficient to warrant us in accepting that they in any satisfactory sense accounted for the great flow here indicated as departing from certain points. Indeed a consideration as to where most of the flow to the South Atlantic division terminated, indicated the city of Baltimore to two colleges; and the city of Atlanta to one college, none of which colleges however have low fees. Nearly all the North Atlantic flow to the South Atlantic division ends in the city of Baltimore—one college 90 students, and over one-half; another college 56 students; of the South Central

flow to the South Atlantic division ends in Atlanta—one college 76 students, and nearly one-fourth of it goes to Baltimore—one college 22 students, another college 12.

So far as any mention has been made of figures in these studies, they are based upon the announcements, and every effort has been made to exercise due care to secure accuracy in any count or calculation of them, therefore in the main they are believed to represent existing conditions.

The comparative relation of the flow out of, or into any division can be shown by this Chart, a copy of which I pass around in the accompanying photograph. It will be readily seen that the South Atlantic division



had the least flow out, and the greatest flow in, of any of the divisions. Let us now ascertain the number each of the States in any division furnished to this flow, that the question of the necessity for departure on the part of students from that division, may be seen in the light of the advantages furnished within that given State by which a dental education could have been secured at home.

	Students leaving State.	Number of colleges in State.	
Maine .....	20		
New Hampshire..	2		
Vermont .....	10		
Massachusetts ...	24	2	Lost from this State a number very nearly equal to 1-13 of the number educated from the division.
Rhode Island ....	8		
Connecticut .....	18		
New York .....	78	3	Lost from this State a number nearly equal to 1/5 of the number educated from the division.
New Jersey .....	14		
Pennsylvania ....	108	5	Lost from this State a number equal to a little over 1-10 of the number educated from the division.
Delaware .....	14		
Maryland .....	5	3	Nearly 50 per cent. of the students in this State came from outside of the division. Lost from the State a number not quite equal to 1-47 of the number educated from the division.
Dist. Columbia ..	2	3	Lost a number equal to 1-42 of the number educated from the division.
Virginia .....	8	1	Lost from the State a number equal to a little over 1/4 the number educated from the division.

## ITEMS OF INTEREST

West Virginia ...	21
North Carolina ..	9
South Carolina ..	10
Georgia .....	20

Florida .....	11
Kentucky .....	36

Tennessee .....	21
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Alabama .....	48
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Mississippi .....	28
Louisiana .....	38
Texas .....	46
Arkansas .....	10
Oklahoma .....	2
Indian Territory ..	..
Ohio .....	62

Indiana .....	21
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Illinois .....	38
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Michigan .....	8
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Wisconsin .....	13
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Minnesota ....	13
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Iowa .....	12
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Missouri .....	29
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North Dakota ....	2
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South Dakota ...	1
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Nebraska .....	6
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Kansas .....	5
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Montana .....	12
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Wyoming .....	1
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Colorado .....	6
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New Mexico ....	2
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Arizona .....	2
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Utah .....	8
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Nevada .....	..
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Idaho .....	2
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Washington .....	10
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2 Nearly 50 per cent. of the students in this State came from outside the division. Lost from the State a number equal to nearly  $\frac{1}{8}$  of the number educated from the division.

1 Nearly 50 per cent. of the students in this State came from outside of the division. Lost from the State a number equal to over  $\frac{1}{3}$  of the number educated from the division.

4 Lost from the State a number equal to not quite 1-10 of the number educated from the division.

1 Lost from the State 8 more than was educated all told; and 12 more than was educated from the division, that is a number equal to 120 per cent. of the number educated.

5 Lost from the State a number nearly equal to  $\frac{1}{6}$  of the number educated from the division.

2 Lost from the State a number equal to nearly  $\frac{1}{8}$  of the number educated from the division.

4 Lost a number from the State equal to nearly 1-25 of the number educated from the division.

2 Lost from the State a number equal to 1-32 of the number educated from the division.

1 Lost from the State a number equal to over  $\frac{1}{6}$  of the number educated from the division.

1 Lost from the State a number not quite equal to 1-7 of the number educated from the division.

2 Lost from the State a number nearly equal to 1-14 of the number educated from the division.

4 Lost from the State a number a little over 1-14 the number educated from the division.

1 Lost from the State a number not quite equal to 1-7 of the number educated from the division.

2 Lost from the State a number equal to  $\frac{1}{4}$  of the number educated from the division.

1 Lost from the State a number equal to a little more than  $\frac{1}{3}$  of the number educated from the division.



Oregon .....	17	
California .....	66	2     Lost from the State a number not quite equal to ½ of the number educated from the division.

Many interesting deductions may be possible in any thoughtful consideration of the statistics here developed; but the limitations of this paper permit us to indicate only the more striking facts.

It is readily seen that Pennsylvania, New York, California and Ohio sent from their boundaries greater numbers numerically, while the most marked loss proportionate to the number educated from any state's own division, was sustained by Alabama.

Virginia, Colorado, Kentucky, California, and Washington quite evidently failed to keep their own students at home; and on the other hand, Maryland, District of Columbia, Michigan and Illinois very decidedly retained their own. It is to be noted that Maryland, Georgia, and Kentucky drew nearly 50 per cent. of their students from outside their division, which is the South Atlantic in the case of the first two mentioned, and the South Central in the case of the other.

In compiling these statistics, the question arose as to their validity, based as they were upon the announcements of 1897-'98 only. The work was, therefore, repeated in the main with the announcements of 1896-'97, but the results were not materially altered; nor was it supposed that they would be, as a marked change in the statistics is likely to occur only at the expiration of every three years. A class goes and a class comes each year, and while it is not impossible for the incoming class to cause a marked fluctuation, our test proves that at least in this census it has not. Of the whole number of dental students, 6,507, one-third were to be found in the two cities Chicago and Philadelphia; Baltimore and Boston also had large numbers, but with neither did the number reach 50 per cent. of that of either of the two leaders. Philadelphia had a larger number of dental students than any other city in the United States, viz.: 1,107, with Chicago a close rival, 1,061. It may cause some surprise that no mention is made of New York as a leader, the great metropolis of America, with the largest population of any American city, but the statistics do not so place her.

A glance at the map will show the basis for a good argument in favor of the National Associations not meeting west of the Mississippi River. The center and mass of dental education lies east of that line, thirty-nine of the colleges being east of it, and five of the other thirteen being on the line, while the population east of it is probably eight times that west of it.

## Some New Experiments with Amalgam; Large Amalgam vs. Small Amalgam Pluggers.

By E. K. WEDELSTAEDT, D.D.S., St. Paul, Minn.

*Read before the New Jersey State Dental Society, July, 1897.*

From 1874, when Doctors Bogue, Cutler and Hitchcock gave the dental profession the results of their experiments, to 1895, when the justly celebrated Dr. Black published in the *Dental Cosmos* a series of papers on "The Physical Properties of Silver-Tin Amalgams," we were without any scientific advance on this subject. I will admit there was a considerable amount of literature published as regards amalgams during the interim, but it was of little scientific value. From the time of the discovery in 1894 of the black ditch around amalgam fillings that were made in steel cavity blocks, to the discovery that the annealing of alloys changed their entire character, we made the greatest advance that has ever been made since amalgam was first used as a filling material. A review of all that was discovered between these periods is not necessary. It is in the journals.

If we ask a dozen different dentists about the manipulation of amalgams, it will be found that they are all at sea. If we ask what instruments they use, we will find the same condition of affairs. No two have a similar set of pluggers; in fact, no one seems to know anything about the subject. With one set of writers, it is beyond their conception that anyone can use an amalgam plugger that is serrated; another set holds views that are diametrically opposite.

Experimental fillings made from the same mass or mix of amalgam, with the same sized smooth and serrated pluggers, when tested, do not show any difference in strength or flow—the results are the same. It *does* make a very great difference as to what the size or diameter of the face of the plugger is, and it *does* make a greater difference than it is possible for me to tell you as to the manner in which the amalgam is packed into the cavity. If it is simply compressed, we make the most of our possibilities. A homogeneous filling is the product of compression. If it is worked too much, a poor mass at best can be the only result. It does not make any difference how strong an amalgam may be; if it is not handled as it should be it is weakened so appreciably, that it will not be recognized as the original amalgam. The results of this and many similar series of experiments prove this statement. We have all observed how amalgam fillings shrink (?) away from the margins of our cavities. This has in the main been laid at the door of "stress," but

stress is not responsible when this takes place in amalgam fillings on the buccal surfaces of many molars. Improper instrumentation has something to do with it.

Summary of the results of experiments made with Amalgam, showing the difference in crush and flow where small and large serrated pluggers with different stress were used to make fillings.

Serrated Plugger, 1 - Millimeter in Diameter, 13½-Oz. Blow.			Serrated Plugger, 1 Millimeter in Diameter, 2-Lb. 11- Oz. Blow.			Flow.	Crush.	Percentage of Alloy.	Percentage of Mercury.
Blows.			Blows.			Average Per Cent.	Average Lbs.		
15	30	45	15	30	45				
I	..	..	..	..	..	21.10	665	66.68	33.32
..	I	..	..	..	..	18.46	653	"	"
..	..	I	..	..	..	42.81	473	"	"
..	..	..	I	..	..	76.43	320	"	"
..	..	..	..	I	..	100.	103	"	"
..	..	..	..	..	I	100.	83	"	"

Serrated Plugger, 3 Millimeters in Diameter, 13½-Oz. Blow.			Serrated Plugger, 3 Millimeters in Diameter, 2-Lb. 11- Oz. Blow.			Serrated Plugger, 3 Millimeters in Diameter, Hand Pressure.	Serrated Plugger, 3 Millimeters in Diameter Hand Mal- let, 30 Blows.	Flow.	Crush.	Percent- age of Alloy.	Percent- age of Mercury.
Blows.			Blows.					Average Per Cent.	Av. Lbs.		
15	30	45	15	30	45						
I	..	..	..	..	..	....	....	22.46	633	67.11	32.89
..	I	..	..	..	..	....	....	14.05	712	"	"
..	..	I	..	..	..	....	....	18.81	680	"	"
..	..	..	I	..	..	....	....	5.05	900	"	"
..	..	..	..	I	..	....	....	8.31	900	"	"
..	..	..	..	..	I	....	....	9.82	900	"	"
..	..	..	..	..	..	I	....	8.07	900	"	"
..	..	..	..	..	..	....	I	8.04	900	"	"

The accompanying tables record different results with the one millimeter plugger, and the three millimeter plugger. Both were serrated. The alloy used in these experiments was composed of silver 55, tin 40, and copper 5. All was taken from the same bottle. The alloy was specially made for me about a year ago. It was never unsealed until April 21, and was not annealed. The mercury used came from a one

pound bottle. The alloy and mercury were in each case weighed before the mass was mixed. The mix is known as a "hand mix." (See December, '96, *Cosmos*, Page 973.) The size of the fillings was 100, by 143 thousandths of an inch, or 2.5 by 3.5 millimeters. Cylinders—here are some in these bottles; you can inspect them. The same cavities in the steel block were repeatedly refilled. Each filling was made of three pieces of amalgam. The fillings marked 15 blows; each piece of amalgam placed in the cavity received 5 blows. Those marked 30 blows; each piece received 10 blows. Those marked 45 blows, each received 15 blows. Where a 13½ ounce blow or a 2 pound 11 ounce blow was used the weight of the blow was indicated. It was not more nor less. The fillings were made April 21, 1897, and on May 7 they were placed in the compressor to note their flow, or how much they would shorten under stress, and to ascertain the amount of stress they would resist before they would crush. These averages vary but a trifle from those obtained by former experiments made along the same lines with other alloys. This series was made especially for your society.

In analyzing this table, it may be well to state that you are not dealing with speculative or unsupported theories. You are dealing with scientific truths, and a scientific truth, according to my friend Crawford, is "Common sense made exact."

Any one can take these results and prove them by making similar experiments. A 13½ ounce blow was used so you could note the results with light stress, and see its effect on the amalgam with a small and a large plugger. A 2 pound 11 ounce blow was used for the reason that it is a medium heavy blow and is used by the majority of operators working with the automatic mallet. 15, 30 and 45 blows on each filling were adopted so you could note the difference between compression and chopping the amalgam. It is at all times necessary, in making a line of experiments for yourself or others, to select as many ways as possible so that you may get at the exact facts.

In my own work 30 blows for the experimental fillings have been the rule from the start, but after making several series of experiments with the one millimeter and three millimeter pluggers (serrated and smooth) in which 30 blows of mallet force were used for each filling, I felt, as this was an entirely new line of work, you could more easily grasp it than if the results of the original series of experiments had been printed.

You can note the difference in flow and crushing stress where 15, 30 and 45 blows have been used with either a one millimeter or a three millimeter plugger. The difference between the hand mallet and hand pressure is not such as to call for more than passing notice. The reason for not

making fillings with hand pressure and hand mallet, using the one millimeter plugger, is simply that I have made a great many in the past and found them all useless. You can note what an important part stress plays and what its influence is. You can also note what the one millimeter plugger does with light and heavy stress, with few and with many blows. You can compare these results with those obtained with the three millimeter plugger and they will tell their own story.

The tabulated results teach us that if we wish to obtain the best results with amalgam, we should use the largest plugger (smooth or serrated) that will conveniently go into the prepared cavity. If the amalgam is then compressed an ideal filling is the result provided the alloy has been properly treated and mixed.

There is one word I wish to say as regards the apparatus used in obtaining these results. It is scientifically correct, and tells its own story. It cannot be so manipulated that the results will come out to suit one. A carefully balanced scale tells the correct weight of the substance it weighs. For the same reason the compressor and mallet are correct, and cannot be otherwise if carefully watched and taken care of, and this is and always has been done.

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## **Necrosis of Hard Palate.**

By DR. H. C. GILCHRIST, Nyack, N. Y.

*Read before Second District Dental Society, Newburgh, N. Y., October 11, 1897.*

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We often meet peculiar and interesting cases in our practice which are worth recording, as they may be the means of helping others in the future if they should meet similar cases.

One day during the summer of 1893, there came to my office a young lady about twenty-three years of age, to consult me about a large swelling in the roof of the mouth, extending from the incisors to the soft palate, being one inch in thickness.

Upon getting the history of the case, I found that some time previously she had had a central incisor that had abscessed; her dentist having failed to destroy the abscess, she, in a fit of desperation, went to her family physician and had the tooth extracted.

A few days after the extraction the swelling appeared in the roof of the mouth; her physician after repeatedly lancing, finally told her that it was only a lump of flesh, and that it would "disappear after a while"; such was the condition when she came to me for advice.

Upon examination I found that the abscess sac was filled with pus, although she said her physician had lanced it that morning. I found he had lanced at the highest instead of at the lowest point, and consequently had not evacuated the sac. I then inserted my lance in the bottom of the sac, whereupon it discharged about half an ounce of thick yellow pus, which gave her immediate relief, much to her astonishment, as her doctor told her that there was nothing in it.

In a few days she returned with the swelling as large as ever. Again I evacuated it. This time I found that it was distinctly bone pus. I then came to the conclusion that there was necrosed bone, whereupon I took a small piece of broom straw, having first thoroughly soaked it in carbolic acid, then coating it with vaseline, I inserted it in the opening made with my lance and tied it fast to one of the incisors. This kept the abscess open and allowed the pus to discharge.

This I kept in the pus sac for two weeks, when I found that a fistulous opening had occurred at the junction of the soft and hard palate, and upon passing my probe through the opening, I found a peculiar roughness that led me to believe that there was a piece of dead bone trying to exfoliate, whereupon I gave the patient a small syringe and some hypsulphite of soda, with which I directed her to syringe out the pus sac twice a day. This treatment was continued for three weeks, reducing the sac very much in size, when upon examination I found that the necrosed bone had detached itself. I placed the patient under the influence of nitrous oxide, and opened the roof of the mouth from the central incisor, following the median line, to the beginning of the soft palate, having my assistant at hand with small sponges to care for the hemorrhage and prevent blood from getting in the air passages.

After turning back the flaps, I found the piece of necrosed bone which I removed. It was a piece of the superior maxillary from the left side—one-half of an inch in length by one-sixteenth of an inch in thickness. After washing out the cavity with bi-chloride of mercury (1-10,000) I drew the edges of the flaps together and placed in four ligatures of waxed floss silk, which had been soaked in bi-chloride of mercury. I then placed in a small piece of broom straw again, to act as a drainage tube. In a week's time, the parts being united, I removed the ligatures. The next week I found that there was no discharge, and then removed the drainage, and discharged the patient.

About a month after I saw the patient, and the mouth was thoroughly healed and in a perfect condition.

## The Treatment of Teeth Having Putrescent Pulp.

By DR. F. P. HAMLET, Hempstead, N. Y.

*Read before Second District Dental Society, Newburgh, N. Y., Oct. 11, '97.*

Treatment may be said to be experimental. Knowledge obtained through experimentation is the most valuable, and for the treatment of disease it is always best to prescribe that treatment which has been founded on experiment and practice—for "experience is the best teacher."

But in the treatment of diseased teeth, we never seem to have experience enough. Although we may flatter ourselves that we are capable of soothing any ill that a tooth may have, we find times when that experimental knowledge fails. Then we do not all have the same ideas about disease, or the treatment of disease, and we are treating teeth variously as the result of individual experiments.

The question then arises—Should we adhere to any fixed treatment in our efforts to save diseased teeth? You can appreciate what I mean when you call to mind that severe case of toothache, upon which you have applied all the remedies in your cabinet with but little relief to your patient, and after many vain attempts to soothe the pain, you go to your supply of drugs and discover some medicine, or combination of medicines, which you have never tried before, and upon applying it, the sufferer is relieved.

Medicines do *not* then give the same results at all times, and for this reason the treatment of disease must necessarily be experimental. But this experimenting must proceed with intelligence. The operator must possess some knowledge of diseased conditions, and also know the actions of the medicines he has at his command.

### **The Misuse of Arsenic.**

The young graduate finds his first patient suffering with toothache. He cannot determine from an examination what is the cause or the nature of the trouble. From the apparent suffering of his patient,

he decides to "kill the nerve" as a means to stop the ache, so he proceeds to use arsenious acid, applying it, though unconsciously, to a nerve already congested and inflamed. The patient—"Oh, where is he?"—crazed with pain, and likely to suffer long after the pulp is dead. What is the cause of this prolonged suffering? The irritation caused by the action of the arsenious acid has inflamed the inner membranes, found

its way through the dental tubes, destroying the albumen, cutting off blood supply. But before it has caused such utter destruction, the tooth is filled and may keep quiet for months, perhaps years, or until the effects of the poison reaches the cementum; the tooth then becomes a foreign substance—as foreign to the delicate membrane as a piece of wood. Nature rebels. Pericementitis sets in, and it is an act of mercy to extract the tooth before greater trouble asserts itself.

Some mechanical or surgical means to extirpate a pulp is far better than the unlimited use of destroying agents. A tooth can certainly be treated and filled in less time, and with better results.

The treatment of devitalized teeth is wearisome indeed, and the length of their usefulness is limited. We have men who boldly assert that they never have trouble with a devitalized tooth, because their method is so thoroughly effectual. In fact there is nothing left to cause after trouble. How do they know there is nothing left? Is it that their sense of smell is so keen? Their touch so delicate? Their sight so perfect? Or by the number of times the cavity is washed? Certainly they must have some means of knowing just when the tooth is sufficiently treated, so that forever after it will be peaceful. It seems to me quite impossible to know this without a doubt. We cleanse the tooth to *our* satisfaction, but that does not necessarily mean that nature approves of it. Nature becomes offended at slight causes. We remove pulp in all stages of decomposition, and though we are careful to follow that method, which is thoroughly clean, we are nevertheless sometimes disappointed in our efforts.

The best therapeutic medicaments for the treatment of diseased or devitalized teeth, are those which meet the conditions.

**Requisites in  
Treatment of  
Putrescent Pulp.**

In a tooth where the pulp has already dissolved, becoming putrescent, we have a pathological condition which requires the greatest care. The medicaments must possess first, the power of destroying the products of putrefaction; secondly, the power of destroying the agents of putrefaction; and thirdly, to have the power of coagulating or permeating the remains of the dental fibres.

Sulphurated hydrogen gas is the product of putrefaction, which is generated by the decomposition of dead pulp. Decompose the gas by using iodoform, also a deodorant—remove all dead matter and we are ready for the second pathological condition—the “agent of putrefaction”—wash thoroughly with oil cinnamon or eucalyptus, the former preferred, seal the tooth temporarily, leaving oil cinnamon in canals for a week or more.

The third pathological condition can be best treated by forcing into



the remaining tooth some preserving fluid—a fluid which will incorporate with dead albumen. Chloride of zinc or creosote, or both in combination, has proven satisfactory and generally reliable. It readily permeates the dentinal tubuli and puts the remaining tooth structure in a state of health.

We have then three conditions to meet in the treatment of diseased teeth before filling them:

1. To destroy the products of putrefaction.
2. To destroy the agent of putrefaction.
3. To charge the tooth with an agent of preservation.

Chloride zinc being a coagulant, converts all the fluid matter remaining in the tubuli into a consistent state, and for that reason great care should be exercised in applying it at the right time.

A very extensive paper treating of this subject was read by Dr. A. W. Harlan at a dental meeting held in New York City. Dr. Harlan claims that the use of a coagulant at the first stage of treatment, closes up the mouths of the tubuli and prevents antiseptics going through the tooth, while Dr. Barrett, in the *Dental Advertiser*, claims that the very first requisite is coagulation, and that coagulation is the very thing that should be brought about.

Dr. Barrett then attacks the pathological conditions in this order:

1. "Coagulation of the dentinal fibre."
2. "An opportunity to melt down." (To dissolve, I presume, is meant.)
3. Careful sterilization.
4. Sealing of the tubuli.

He uses coagulants, while Dr. Harlan discards them.

**Method of  
Treatment for  
Putrescent Pulp.**

My order of treating putrescent pulps may occasionally fail, but I have faith in it for the majority of cases which come under my care. First, open the pulp cavity well if it has not already been done, and before removing any of the putrescent matter, destroy the product of putrefaction which is the sulphuretted hydrogen gas, formed by the decomposed dead matter. For this I use iodoform carried into the tooth in powder form. Then destroy the agent of putrefaction by washing with antiseptics and sealing the cavity, having first charged it liberally with oil of cinnamon, or eucalyptus, the former preferred, letting it remain closed for several days.



## New Jersey State Dental Society. — Seventy-Seventh Annual Meeting.

### Discussion of Paper by Dr. E. R. Wedelstaedt.

Mr. President, I want to ask for some information, mainly for myself, and incidentally for my friends. I would like to ask the essayist if he will kindly explain to us what he means by "flow," what the thing does that is called by Dr. Black a flow, the flow of amalgam. About 1826, Taveau gave us his silver paste; and his silver paste was simply the coins of the French realm, containing about nine parts of silver to one of copper, made into a paste. From that time on until 1895, pretty near seventy years, practically three-quarters of a century, think of the hundreds and hundreds of thousands of amalgam fillings that have been introduced by various methods, and that have done from ten to sixty years' service, without anyone discovering that there was such a thing as "flow" in them. Now, I want to know what is this flow? I should like to hear the gentleman from Minnesota, who understands it better than I do, explain it, for I don't understand a single thing about it.

Underlying all principles of reform there are always three elements of evolution, some one says, three steps of evolution: ridicule, argument, and adoption. We find, as we travel through life on life's journey, that many things confront us that have been experiments, and we always find that there is something new. I work out a long line of experiments, and after I have worked them out and made five hundred or six hundred experiments with fillings, a man comes and says to me: "Doctor, how much stress do you use with your hand there?"—and there ends all my work. But others take up the work where I left off, and frequently they happen to be new men, unprejudiced men, and they make experiments and obtain records regarding the subject.

**Flow of Amalgam  
Defined.**

Now, in answer to the Doctor's question, flow is a shortening under stress; in other words, a mesial cavity in a lower molar is filled, and the filling is not anchored in the center, it is anchored to the lingual and the buccal walls; and when stress is brought to bear upon it there is a movement. Stress is a subject that we do not know anything about really. The question is how much pressure would press that filling out. Some call it oxidation. I believe the shrinkage of amalgam is something of that kind. Why, gold shrinks away from cavities in the same way. The fillings are not anchored centrally, they are anchored along the lingual and buccal walls. If you take a magnifying glass and look at a tooth you will see a distinct line between the filling and the tooth proper. It is called oxidizing. Is that the correct term? It is shrinkage. It is force exerted from above that pushes that filling out, and there is shrinkage there. That force is called stress; for the same reason, when we take amalgam fillings and put them under pressure in a compressor, they shrink under the stress. We can take any metal and make it flow. Take the tabulated results; here is a powerful amalgam that flows about 5 per cent. It crushes at 900 pounds. We take these little fillings that were put in with the finger, and although it is the same amalgam, I don't think it will stand a pressure of 100 pounds. It is a question of manipulation in the main. Of course, if you take an amalgam that contains 40 per cent. of silver and 60 per cent. of tin, it will flow down very rapidly, whether you put 10 pounds or 30 pounds pressure on it. Here is a powerful amalgam, as strong an amalgam as a man wants to use—I don't use it because it turns black—but I can manipulate that so as to make it flow. So flow is a shortening under stress. If you step here a minute I will show you what flowage is. (Dr. Wedelstaedt illustrated his remarks with an apparatus for measuring pressure or crushing force.) When I place in this machine a piece of filling and apply force, the needle indicates how much the mass shrinks, and the amount of pressure applied. That is what we mean by the flow of amalgam.

**Dr. Flagg.**

If you place that filling in the buccal face of a lower molar, where do you get stress upon it?

**Dr. Wedelstaedt.**

We don't have any stress there. The shrinkage then is due to improper instrumentation.

The old idea of working all the mercury out of the amalgam is not right; we want the mercury there. The idea in grouting a cellar floor is to hold stones together with mortar; we want the mortar there, and we want the mercury there.

**Dr. Watkins.**

In putting in a filling you would not fill the cavity more than full, with the idea of cutting off the soft part on top?

**Dr. Wedelstaedt.**

I don't have any soft part on top.

**Dr. Watkins.**

Are you sure that the filling is of the same consistency all the way through?

**Dr. Wedelstaedt.**

So that it is a homogeneous mass, I do not care anything about it. We do not work amalgam the same as we do gold. Gold is worked always from the center towards the margins; amalgam is always worked from the margins toward the center.

**Dr. Watkins.**

In putting on a pressure of 30 to 40 pounds, do you not press the mercury to the surface rather than drive it toward the center, and make weak edges all around?

**Dr. Wedelstaedt.**

I do not think so. I do not think the mercury comes to the surface much in the filling I use. In mixing amalgam I always mix a surplus of mercury, because it gives a stronger filling. I think we work the mercury out too much.

**Dr. Watkins.**

I believe that a filling made in that way would certainly not be as strong, and as little liable to shortening or change of form, as one put in densely, the cavity being filled much more than full, and the mercury drawn to the top and the filling then cut away to the solid body, so that you would have the same consistency all through the filling.

**Dr. Wedelstaedt.**

It is only necessary to put the fillings into an analine solution to see. It is a very easy experiment.

**Dr. Roberts.**

I would like to ask whether, in putting in amalgam into a block there is any difference in the results, whether it be put in quickly, immediately after mixing, or whether it is allowed to remain to the crystallizing point before putting it in. Which is the better way?

**Dr. Wedelstaedt.**

The amalgam I use sets within two minutes, and it is necessary to get it in very soon after it is mixed. Everything should be ready, so as to put the amalgam into the tooth as quickly as possible.

**Dr. Palmer.**

I should like to ask the gentleman what the formula of his amalgam is.

**Dr. Wedelstaedt.**

It is composed of 60 parts silver, 30 parts tin, 8 parts copper bronze and 2 parts zinc. Dr. Flagg, did you get that?

**Dr. Flagg.**

Yes; and I would like to know what you mean by copper bronze.

**Dr. Wedelstaedt.**

I don't know. Ask A. C. Hewitt, of Chicago; he will tell you what is in copper bronze.

**Dr. Joseph C. Head.** Is not copper bronze a rather unstable mixture; may not the components vary considerably? Would not the alloy which is made of it be a rather uncertain substance?

**Dr. Wedelstaedt.** These experiments were not made with that alloy. What a man personally uses in his business is another thing. That is what I use myself in filling the teeth of my patients. After using amalgam for twenty-two years I think it is the best substance I have found. It is very hard, very strong, and keeps its color well. I have not been able to make it shrink or expand; I have not been able to do anything with it except to get very satisfactory fillings, unusually hard fillings. I do not think there is another amalgam in the market that is as hard. I am not an agent for Dr. Hewitt or this amalgam.

**Dr. Head.** I naturally thought that, if the Doctor was experimenting with an amalgam, his experiments would be carried on with the amalgam which he thought best for his patients.

**Dr. Wedelstaedt.** I think, Dr. Head, that I made over 600 experiments with this amalgam, and the experiments have been very satisfactory to me in the past, and therefore I adopted it as a filling that I found would stand in the compressor and not flow. That is the reason I use it. I did not make the experiments with the white simply because I preferred an amalgam that is in more or less general use; and you will find that the amalgam I have given you the formula of and made these experiments with is in quite general use in dentistry.

**Dr. Head.** Is this amalgam that you use perfect, according to your test; or have you made any tests with it?

**Dr. Wedelstaedt.** I have made over 500 experiments with it.

**Dr. Head.** Is it satisfactory?

**Dr. Wedelstaedt.** Yes.

**Dr. Head.** As regards your general work, or the results of these experiments?

**Dr. Wedelstaedt.** As regards both.

**Dr. Head.** Concerning the flow of which you spoke, when you pack your amalgam into a cavity where the pressure of mastication does not come upon it, do you find that there is any flow under those circumstances?

**Dr. Wedelstaedt.** I never use it there. I use the white alloy. I use it for the buccal surfaces of molars in the upper or lower jaw. I have only used it for about two and

a half years; there has been no change in that time, nor have I seen a black line around the filling.

**Dr. Head.** I should like to ask the gentleman's opinion of mixing amalgam very dry, packing it just before it sets, and working it in with a hot instrument, so that there is absolutely no excess of mercury, or as little as possible, and finally filling the last part with an amalgam that sets instantly?

**Dr. Wedelstaedt.** There is no virtue in hot instruments, and no man can make a first-class amalgam filling with a hot instrument. You cannot use a hot instrument on amalgam and obtain the results that should be obtained.

**Dr. Osmun.** I would like to ask the gentleman how he would recommend mixing amalgam; whether he would recommend mixing it in the hand or in a mortar until thoroughly mixed, or to simply work it enough to take up the mercury.

**Dr. Wedelstaedt.** Every man has his own idea of how to mix amalgam. Personally I mix my amalgam in two ways: I take a rubber pointed pencil, a pencil that has a little rubber on the end; I drop my amalgam and mercury into the mortar and work it backwards and forwards with the pencil, then take it in my hand and knead it; I do not grind it with a pestle, for the simple reason that the more you grind it the more you grind the mercury into it; you take up more mercury than you would otherwise. Whether it is mixed in a mortar or whether it is mixed in the hand, I do not see that it makes very much difference, only that if you mix it in a mortar and grind it, taking 50 per cent. of mercury and 50 per cent. of alloy, you frequently have to add more mercury, whereas if you mix it in your hand—whether it is the heat or the moisture of your hand I don't know—or with the pencil rubber, it does not seem to require so much mercury. I never rub amalgam; it dissolves too much of the tin with the mercury, and makes a weaker filling.



## The Central Dental Association of Northern New Jersey.

### Discussion of Paper by Drs. Brown and Faught.

This paper is eminently a paper of statistics, and  
**Dr. Ottolengui.** there is an old saying that statistics nearly always lie. The first flaw in this statistical array, is the fact that however powerful the arguments may seem, they apply solely and only to the census which they cover; consequently the results may be coincidental.

Statisticians of to-day, when they desire to get at less lying statistics than are usually obtainable by the more primitive method of selecting a particular period, have a rather more complex method than has been followed here. For example, statistics on political economy are prepared first in periods of ten years; say from 1860 to 1870, from 1870 to 1880, and so on. Then other statistics are prepared; from 1861 ten years; another set from 1862, another set from 1863, and so on; and it is only when an average of all those decades are taken that we obtain statistical deductions which in any way represent the statistical truth for the whole period covered. It is possible that the statistics presented to-night are accurate; I have no doubt that they are accurate, but they might vary very materially if taken five years ago, or five years hence. So to a certain extent we must admit that these results may be coincidental.

But there is another fact which has not been considered, to which I must refer; and I refer to it with some feeling, because my birthplace is in that South Atlantic division which seems to be attracting students from other divisions; for the evident moral in this story is that the colleges in that section, which are attracting students from other sections which admittedly include better educational centers, must be gaining their students through some cause not creditable to the section. The action, the alleged action of the Southern colleges in compelling the National Association or Dental Faculties to lower their standard was one which, as a native of that section, has made me feel ashamed, and I would feel more ashamed could it be positively proven by these statistics that it is because of the lower standard that these students are leaving their own sections and flocking to Baltimore and to Atlanta.

I wish now to give our statistical friends a fact which I think was not considered. Other influences than the pecuniary influence, or the influence of contiguity may explain the attractiveness of any college, to

any particular set of students. There is engendered in the bosom of every man, who has been educated at any educational center, a feeling of pride in the place which gave him his education, and this feeling is peculiarly strong with men who gain a professional education. Now, the Baltimore Dental College is the oldest dental college in the country; whether it is the best dental college in the country or not is another matter, but it has a halo around it which will attract students; there is a very natural desire to hold a diploma from the Baltimore Dental College which will not only attract many students voluntarily, but which will attract students through graduates of the Baltimore college who love their Alma Mater. This college loyalty will influence a practitioner to send students, if possible, to the college which gave him his education; and I am very well satisfied that if further statistics could be prepared which would tell us who were the preceptors of these men who have gone out of their own territory to go to Baltimore and Atlanta, we would find that a very large percentage of those preceptors were graduates of those institutions, and that these students were sent there by the advice of their preceptors.

I must express my admiration for the work done in collecting these statistics, and I have no doubt that this paper will prove very entertaining to the faculties of the various colleges, who will be better able to know what is the real explanation of this influx from outside territory, than we are; and I think that now, when the subject of education is so largely being discussed in the community, it is very timely that a paper of this kind should be brought out in which these statistics can be studied by those who are engaged in educational work, and especially those who are teaching in those territories from which the greatest number of students are lost. I notice, curiously enough, that the greatest loss seems to come from that section which did not vote against the lowering of the standard. They did not vote for it, and I am told they did not vote against it. They allowed these Southern colleges to lower their standard of education; but if they find now that that is the explanation of the flow of students from their sections to these Southern colleges, they may, perhaps, vote for a higher standard next year.

**Dr. Hill.**

How did they lower the standard?

**Dr. Ottolengui.**

I was not present when the action was taken, but the facts as they have been reported in the dental journals throughout the country are these, and they are simply my impressions as I have taken them from various sources: A committee, as I understand it, was appointed by the National Association of Faculties to arrange a uniform standard for admission to the colleges throughout the country; that committee consulted with Mr.



Dewey, of the New York Board of Regents, and with the assistance of Mr. Dewey they arranged a standard which practically insisted upon a certificate of attendance at a high school for admission as a student to a dental college. The report was made at the session in Saratoga to the National Association of Dental Faculties last summer, in 1896, and it was adopted. Now, it was understood at that time that every college sending out a prospectus for the season would announce that standard for the admission of a matriculant, but certain colleges—I use the word because that is the word that has been used—certain colleges announced to the National Association of Dental Faculties, through a committee, that they could not live under the requirements; that they could not in their section, where they were doing business, get students of that caliber; that the students in their sections had no opportunity to get that sort of education before going to work; they could not afford to go to a high school before going to college, but must go to college right away. The committee suggested to the individual colleges throughout the country that they omit the new standard from their prospectuses until the matter could be again discussed at the next session; consequently the standard never was promulgated. At the last meeting of the National Association of Faculties, down at Old Point Comfort, these same objecting colleges, made the same claim, that they could not live under that rule,—and I have said since that if they could not, they might better die. However, they did not think so, and, as intimated, the men who were in charge of our large university schools appeared unwilling to place themselves in the position of doing anything to crush out the smaller schools, consequently, while they were opposed to the lowering of the standard they did not vote against it, and did not raise their voices in argument against it, and the result was that the point was raised that this resolution adopted at Saratoga was irregularly adopted because the committee had consulted with Mr. Dewey. I am sure there is nobody in this room who does not know that from a parliamentary standpoint that is ridiculous; that because the committee took advice before making its report, therefore it was irregular. They might as well say that if the committee looked into the *Encyclopedia Britannica* their report could not be adopted. However, the point was ruled to be “well taken,” and the Saratoga resolution was declared null and void. The faculties practically adopted the law of the State of New York in 1896, and threw it out in 1897, and now have gone back to the Grammar School education.

**Dr. Brown.**

I did not care to speak on this question, but Dr. Ottolengui's remark, in regard to the lowering of the standard by the Southern colleges, that the rep-

representatives of the large university schools did not vote on that, struck me as very amusing, inasmuch as the Committee on Colleges finds that the opposition does not come from that direction at all, and that the only opposition that we met with in getting recognized, or getting an agreement to live up to the very mild rules of the National Association of Examiners, comes from the great universities. For instance, take the University of Pennsylvania, which I believe Dr. Stockton held up as the great example of the country. Look at their advertisement in the *Dental Cosmos* for November and you will see that "candidates for admission are required to write an essay not exceeding two pages of foolscap, as a test of orthography and grammar; second, to pass an examination in the English branches, grammar, arithmetic, history and geography."

My statement that the representatives of the great universities were silent, were not openly opposed to the lowering of the standard, was due to the fact that, down at Old Point Comfort, a very prominent professor in one of the greatest universities told me that this was their course.

There is one point in this controversy that I wish to speak about, and that is the open letter which I read last night in the *Dental Cosmos*, emanating from the Buffalo University, and signed by Dr. William C. Barrett and other officers in authority there. It is very incisive, straightforward and clear. They positively decline to submit to the requirements of the National Association of Dental Examiners. They claim that their allegiance is, first, last and all the time, to the State of New York, its laws and its State Board of Censors or Regents, and that they could not submit, as I remember the letter, to the demands by this National Association of Dental Examiners. They say that, if necessary, they will take proper measures to enforce the position that they have taken, which means, in plain English, that they would go to law to support the students of their institution, operating under the laws of the State of New York. Now, the question that comes into my mind is, what will those students do when they come into the State of New Jersey and apply for registration under our laws? We have laws upon our statute books, whether they be just or unjust, and so long as those laws exist there are authorities back of those laws to enforce them; and if our authorities choose to enforce the laws, what will the students of a New York State institution do when they apply at our doors for admission to practice in our State? If our Board takes the stand that they claim they will take, they certainly will not be recognized, they cannot be recognized, and if they are not recognized where will those students stand? As I understand the subject, and

from my knowledge of our State laws, and from what Dr. Barrett says, it seems to me that a student of his college could not come into our State to practice under any condition whatever.

I think it is a most unfortunate thing that this  
**Dr. O. E. Hill.** fight between the colleges and the National Board of Examiners has occurred, a most unfortunate thing.

To me it is evidence, on one side or both, of a pig-headedness and narrow-mindedness that we ought to be ashamed of. I rise not to defend the University of Buffalo or Dr. Barrett or anyone else. The gentleman who has just spoken says that the graduates of the Buffalo University cannot be admitted to practice in the State of New Jersey. Why? Not because the men are not properly educated, but simply from prejudice. Nothing else. We in the State of New York were the first State in the Union to have a dental law, except Ohio, which was six months ahead, and a very old law in Georgia. We have worked for thirty years to get a law which would, as we claim, secure educated dentists, being careful that every successive amendment to our law would do no injury to any single practitioner. We have amended our law from time to time, we have opened the door to let in elderly men who could not get in in any other way except by special legislation, and our aim has always been to do harm to no one if we could possibly avoid it. I think the State of New Jersey cannot afford to say to the Buffalo University that it is not a reputable school.

Dr. Luckey is a little bit off, and didn't know  
**Dr. Brown.** what he was talking about. He was befogged by that letter from Buffalo. That letter was published long after it was written and had been answered; it was published as an open letter long after it had been answered; and I am going to read to you the answer to Dr. Barrett's letter.

May I ask what the National Association demanded of the Buffalo College?  
**Dr. Jarvie.**

They have never demanded anything of the  
**Dr. Brown.** Buffalo College. They simply asked them to say whether they would be willing to live up to the standard established by the National Association, or do better. We asked them not to go below the standard established at Old Point. Before that meeting we enforced the standard of the Faculties' Association, and the Faculties' Association cut the ground from under our feet by cutting out all their preliminary examinations. They refused absolutely to do anything this year in regard to preliminary requirements. When it was evident that we could not depend on them in that respect we established our rule, after a long consultation with the different colleges; the rule

requiring an applicant to have the qualifications of a graduate from a grammar school, or for admission to a high school. That is as far as we could get the colleges as a body to go; as separate schools they could go as far ahead of that as they pleased. We upheld the New York law and the requirements adopted at Saratoga by the Faculties' Association, as the very standard that we wanted sustained, and there were resolutions passed establishing that standard. It was found afterward that it would be difficult to maintain that, and it was withdrawn and the lower grade put in. Now, we have asked the colleges simply to say that they would not go below the *minimum* grade.

I want to correct another error in regard to a disreputable list. There is no disreputable list, nor any reputable list, or any recognized list. The advisory committee inquires into the status of the different colleges and reports to the different State Boards, but they make-up no lists. We do not pretend to publish a list, we simply gain information for the State Boards and leave it to them to do with it as they please. We have no quarrel with Dr. Barrett; and there is nothing in the idea that Dr. Luckey holds forth.

(Dr. Brown here read a letter written by Dr. L. Ashley Faught to Dr. William C. Barrett, dated October 15, 1897.)

**Dr. Jarvie.** This is a subject in which I am deeply interested, otherwise I would hardly have left my home on this foggy night and have come so far. I am very glad indeed that I came, because I have been enlightened in regard to some points in this controversy between Dr. Barrett and the National Association of Dental Examiners. I have been on the Examining Board in New York now for twenty-one years, so I have attained my majority, and naturally you will infer that I have had some little experience, and take some interest in educational matters. I have watched pretty closely the effect of the action of the Examining Boards upon educational matters. I am one of those who believe that the Examining Boards and the colleges ought to act in harmony. Undoubtedly the Examining Boards have had great influence in raising the standard of education in our colleges. Before the Examining Boards had an existence there was no supervision in any way of the results of the teaching in the dental colleges. Graduates from the colleges have come before some of the Examining Boards who were sadly lacking in the common requisites of a dental education. In a very short time after some of these incompetent graduates were refused admission to practice in various States, the colleges from which they had been graduated found it very necessary to raise their standard of education, so that they should not rest under the stigma of having their graduates refused admission to practice because they were

not competent. The Examining Boards had this influence upon the colleges, and we know very well that during the last twenty years the standard of education in our colleges has been raised very much indeed; the standard of admission has been raised and the standard of graduation has been raised. I do not mean to say that this good result is wholly due to the Boards of Examiners; some of it is due, of course, to the general tendency of the times to higher requirements in education. Until three years ago I was rather opposed to requiring those who had graduated from a dental college and who held a college degree, to submit to a re-examination by an Examining Board, before they should be allowed to practice dentistry in any State. The law that we obtained in New York State three years ago had that requirement, and since that law has gone into effect I have had some experience under it and I am now very sure that it is a good provision. We have found graduates from various colleges that were absolutely ignorant of any education beyond the "three R's—reading 'riting and 'rithmetic," and many had not even that. Some of the examination papers required infinitely more time to decipher, than would ordinarily be required to go through the whole list of questions and make the percentages out. Now, some of those men were graduated from colleges which pretended to have quite a high standard for the admission of a matriculant, showing that some of our colleges have not lived up to the requirements of the National Board of Dental Faculties. I think the Examining Boards have influenced the colleges to require longer terms and to give more thorough instruction. Not very long ago some of the colleges only required two terms, and short terms at that, and in those two short terms, making altogether about ten months, the young men were supposed to learn the theory and practice of dentistry. That has been all changed. Three terms are now required, terms of six or seven months each. I think the National Association of Dental Faculties requires terms of six months each year, for three years. Therefore the Examining Boards have had a great influence upon the colleges; and we want, if possible, to so work in harmony, the College Faculties and the Examining Boards, that there shall be no friction and no hard feeling between them.

There are misstatements and some things that I cannot endorse in that open letter of Dr. Barrett's. He has done as much for dental education, perhaps, as any man in the profession, but we know that he is a man who sometimes gets excited and may fly off at a tangent and write things and say things that he is very sorry for a short time afterward, and I imagine that he will regret having written this letter which has been published. I certainly do not indorse some of the things that he has said in regard to the Examining Board of New York State, and I

take most decided exception to it as a member of the Board, for the New York State Board of Dental Examiners is not in antagonism with the National Association.

I have in my pocket one or two documents, but it is so late I will not take up your time by reading them. They are exact copies, facsimiles, of some of the papers that came before me as a member of the Examining Board in materia medica and therapeutics last winter, and they show absolute ignorance of that subject, and of the English language. The writing was almost impossible to decipher, the spelling, if anything, worse than the writing, and the answers to the questions worse than either the writing or the spelling; and yet these men were graduates of colleges.

**The President.**

Go ahead, Doctor.

I cannot give you the original hand-writing of course. One of the questions was: "Mention a chemical antidote to bichloride of mercury." Answer: "About one-thirtieth of grane." Another question: "Name three different methods by which medicines may be administered." Answer: "Capsuls, pills and form of Licked." Question: "For what is the permanganate of potassium used in dentistry?" Answer: "For relifing aced in the maute." Question: "What are the dental uses of essential oils?" Answer: "Oil of clovs to produs hete, oils of cacia to stop tooth-eck, oils of ventergrin to gif flever in dentifric." Question: "For what is amyl nitrite used, how is it administered and what is the dose?" Answer: "It produces incencibility, is administered tro inhalacken, and the dose from five to ten gallons."

**The President.**

Did he pass?

Not the Examining Board. The few answers I have given you are samples of many that have come under my notice. I do not want to give a false impression and have you believe that a large proportion are of this order, but enough have been quoted to prove conclusively that some of our colleges have been unfaithful to their agreement with the National Association of Dental Faculties and have admitted students without any preliminary examination whatsoever, and granted degrees to students who were absolutely unqualified to practice dentistry.

Now, if the National Association of Dental Examiners would report to the National Association of Dental Faculties, in a kindly and fraternal spirit, the result of their examinations, giving the number examined, the colleges from which they graduated, the percentage obtained in each of the various branches, and if the Association of Faculties would receive such a report in the spirit in which it was tendered and strengthen the

teaching in the departments in which it was found deficient; and the Examining Boards find that in some colleges one department is quite weak, while perhaps in all others the teaching is of a high standard, the result would be to elevate the general standard in the colleges, to gain the confidence of the dental community and the advantage of the profession at large. And how infinitely better such a course than to fire at each other at long range in the dental journals.

Since last July there have been five publications

**Dr. Meeker.** in the different dental magazines of the country, all tending to belittle the Boards of Examiners. Now, there is one point that I want to state for Dr. Jarvie's benefit; that is that the National Association of Examiners does not make laws for the different Boards of Examiners in the country. That is utterly impossible. Each State has its own laws. While the National Association is familiar with the reputability or standing of the colleges, the State Boards can do as they choose about examining students that come from any of the colleges.

The question has been asked: Who are the  
**Dr. Ottolengui.** dental examiners, and what qualifications have they to examine students? Dr. Barrett makes the point that they are utterly unfamiliar with the college curricula, and are therefore incompetent to judge whether these men should be licensed or not. Dr. Burchard says the examiners should be appointed by competitive examination. Now, there are two replies to that. One I made in an editorial some months ago, and the suggestion then offered has been declared, by a majority of the Examiners who met at Old Point Comfort, to be satisfactory to them. The college faculties have been silent on the subject. I do believe that the dental examiners have done just about as much harm as good: I mean that it is just as harmful to the dental profession that we should have examining boards as it is beneficial. When a student goes to a college which is declared to be reputable, matriculates, devotes his time to study and gets his diploma—if it is deemed essential that he should be compelled to pass another examination, I believe, as I suggested, that the college which graduates the man, when it gives him his diploma should return to him his examination papers, and a scrutiny of those college examination papers should be all that the examining board in the state where he desires to practice should require, in order to give him his license. The only object of going back of the diploma is, I suppose, for the discovery of incompetent men who might come in to practice dentistry—on the ground that the diploma does not necessarily prove that the man has sufficient skill to practice. Now, if the college would give with its diploma a certificate, declaring that these were the

examination papers of the student, stamped with the college seal and having every page written in ink, that would save further examination of the student, and then we could know exactly what the standard of the college is when granting a degree. But the colleges are not willing that the examination papers should be scrutinized because of the peculiar spelling, such as Dr. Jarvie finds.

The other point is that the State examiners need not necessarily have the ability of a college faculty. The college faculty that teaches a man and awards to him a diploma, the honored degree of an honored profession should be capable of judging of that man's ability, should be learned men. The examiners are not granting degrees, they simply grant a license to practice, and they are not necessarily obliged to know as much as the college faculty; they only should comprehend the *minimum* amount of knowledge needed in practice, and if they are capable of judging what is the minimum amount of knowledge which the community has a right to expect of a dentist, they are capable of examining. In New York, in the medical examinations, a man is given fifteen questions in his medical examination. He is told that he need not answer more than ten of the questions; and if he correctly answers seven of those ten he is admitted, he is licensed. That does not mean that a man who can answer seven questions out of fifteen is worthy of receiving a diploma, but that a man who cannot meet this minimum requirement is not fitted for practice.

I think the dental examining boards, or licensing committees, should place a standard, below which no man should practice; if he is above it, all right, but below he should be thrown out.

I want to endorse what Dr. Jarvie has said, and  
**Dr. Hill.** add this: It is claimed and appears that the colleges have not lived up to their own standard, and that being the case, the State Boards of Examiners are simply a matter of necessity, because the colleges send out men that are unworthy. Everybody knows that, whether he is a dentist or a patient.







## **A Unique Operating Room.**

DR. J. ALLEN OSMUN, Newark, N. J.

After much thought, and two or three trials at arranging an operating room which should combine the essentials which I conceived to be necessary, I think at last I have achieved success. The hope that the presentation of this plan and description of it may prove of interest to the readers of *ITEMS OF INTEREST* and perhaps aid some of them to overcome difficulties hitherto annoying, must be my excuse for presenting this article.

As I look at the subject, there are four factors of the utmost importance to be considered. First; to have sufficient light for operating successfully and comfortably on the cloudiest of days. Second; to be able to control this light in such a way that on the brightest days, it may be modified so that it does not weary the eyes of the patient or operator. Third; to have perfect ventilation, and yet no draughts. Fourth; to have the cabinet so arranged that it will be ample to accommodate all that can be needed for any operation, and that every drawer, and each medicament can easily be reached by the operator without leaving the side of the patient. With these four cardinal principles in mind, I set about to solve the problem.

The new operating room, supported on two brick piers, is built out over an areaway. This is shown in Fig. 1 and is really a bow window elongated. The dimensions are eleven and one-half feet in length, and nine feet in width, outside measurements.

There is a recess, built into the outside wall, in which the cabinet is built. Opposite the cabinet, and around the other sides of the room, is a paneled wainscoting, mahogany color. The wall above the wainscoting is covered with tapestry, of which, by the way, I learned through an advertisement in *ITEMS OF INTEREST*. Altogether the blending of colors is very restful to the eye. In Fig. 2 is shown the former operating room. It has two windows, each about seven by four feet. There

are no obstructions in the rear of the building to interfere with the light, yet in the fall and winter months, I was often compelled to stop work at an early hour, unless the operation was in the front part of the mouth. This emphasized the inadequacy of the ordinary system of lighting, and suggested to my mind the advantage of an overhead light, which could be obtained by having some sort of a glass roof.

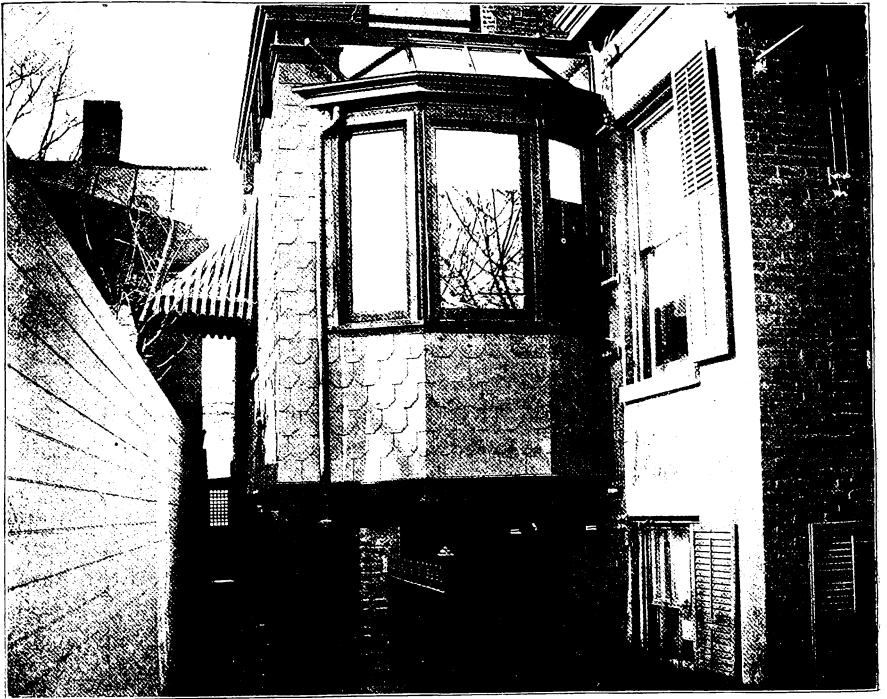


FIG. 1.

It will be noticed that just over the chair, and on each side of the window, there are three electric reflectors, with fourteen sixteen candle lamps, which helped me out on dark and rainy days, but oh! what a strain on the optic nerves. These lights were illustrated in *ITEMS OF INTEREST*, Vol. XIX., page 240, accompanied by a brief description of their arrangement. I find them extremely useful in emergency cases, and would not like to be without them.

Two dials are shown at the side of the window. These are for regulating a compressed air apparatus, used in the treatment of pyorrhea and

other cases. The dial nearest the chair is automatic, and can be regulated to any number of pounds pressure required. The other shows the pressure in the receiver, directly underneath in the laboratory.

In Figs. 3 and 4 are shown two views of the new room; one shows the cabinet, the other the ceiling. The roof and ceiling are of glass. Between the two is an air space of nearly three feet. It would be better if even four or five feet could be obtained. Between this space and the outside are three ventilators, which allow a constant supply of fresh air.

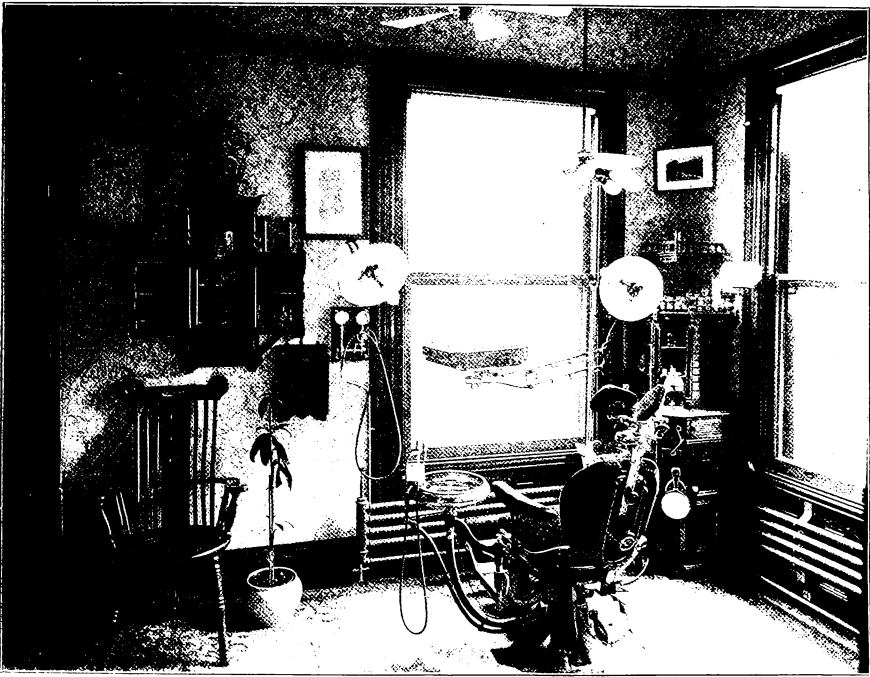


FIG. 2.

On the roof is another ventilator. In place of two glass panels in ceiling, there is brass fretwork. This is just under the ventilator on the roof. The fresh air coming in from the side, between the ceiling and the roof, and passing out of the ventilator on the roof, creates a draught, which draws the air from the room up through the brass fretwork in the ceiling and keeps the room in fine condition. In front of the chair is more brass fretwork, back of which are the steam pipes, and under them are ventilators which provide an abundance of fresh air from outside. This air in passing between the pipes is warmed.

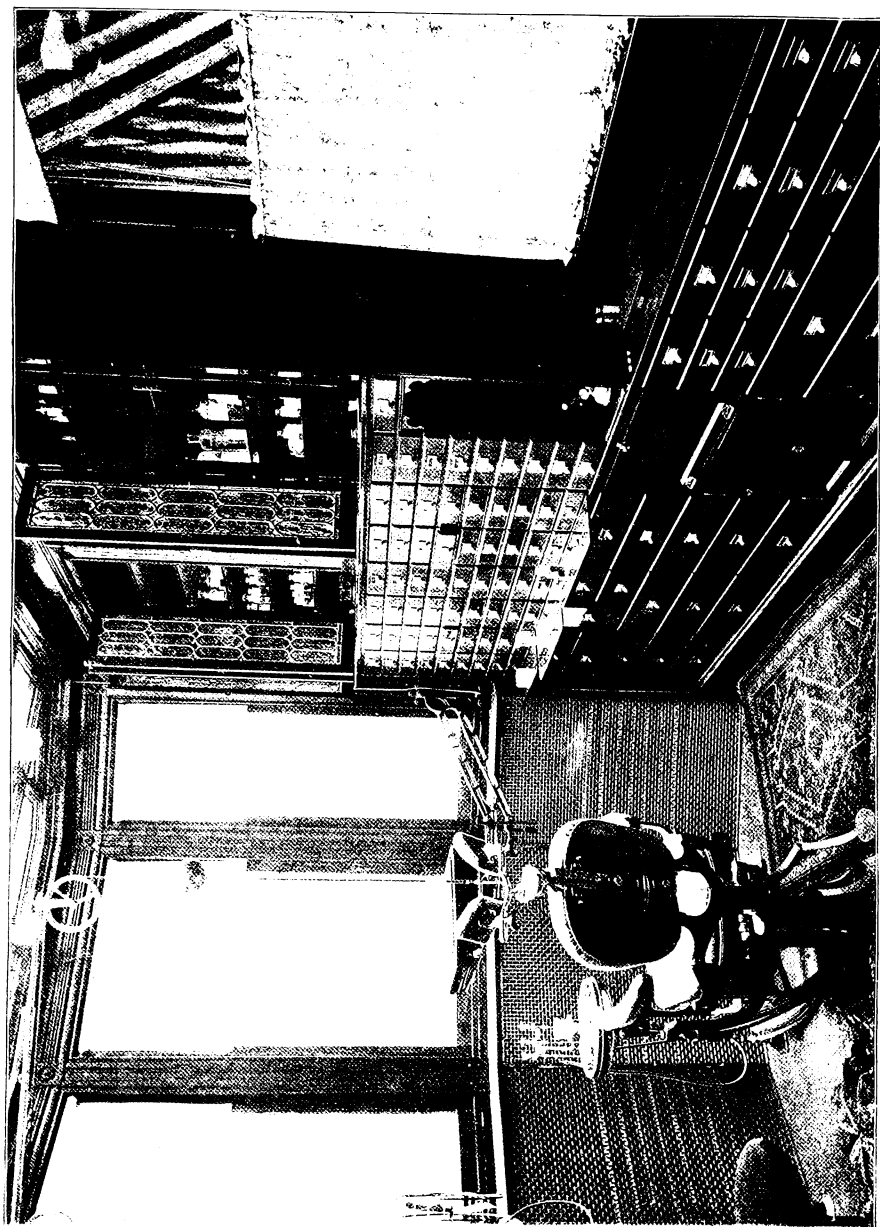


FIG. 3.

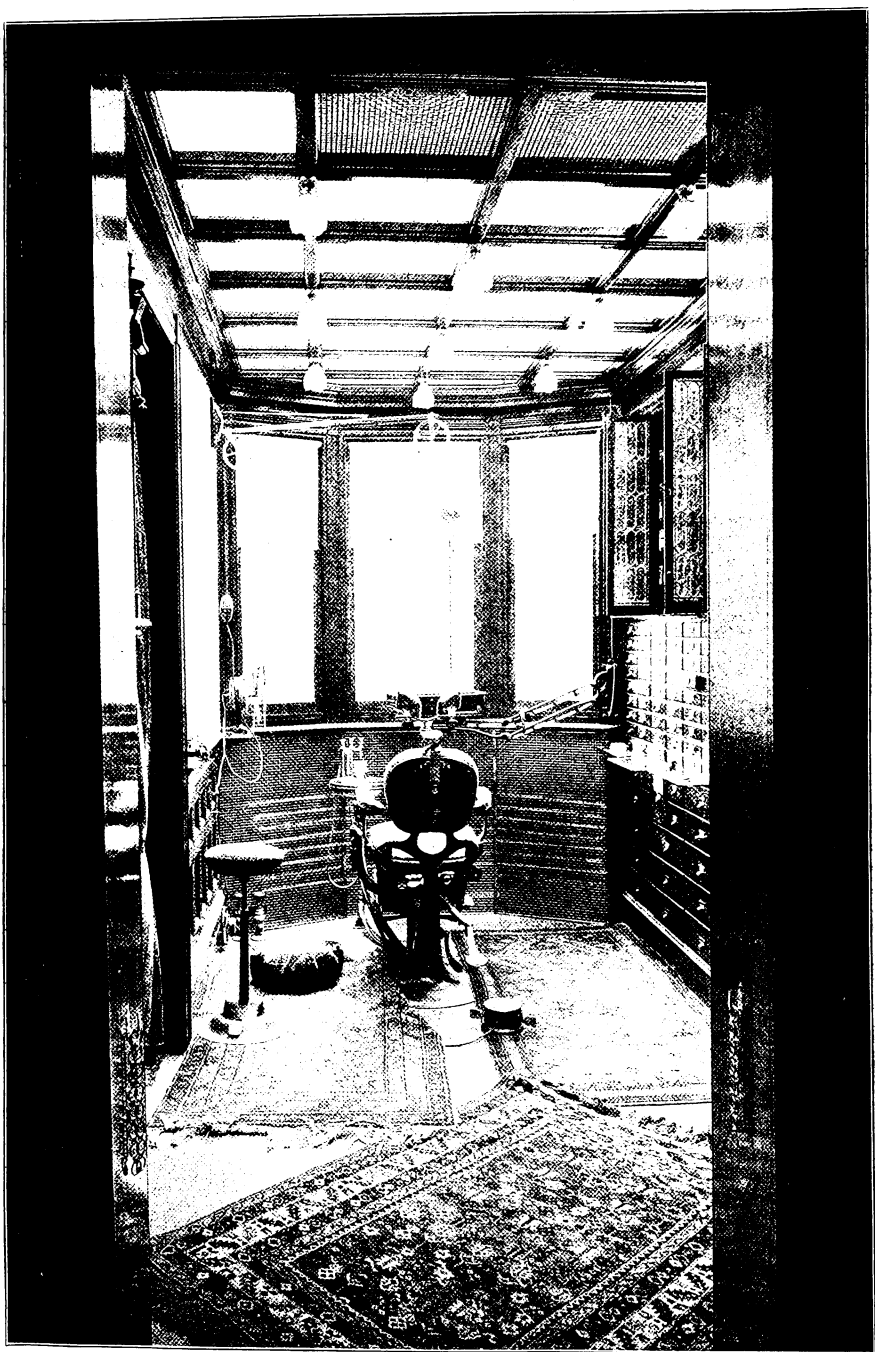


FIG. 4.

To control the light, there are two curtains or shades, placed cross-wise of the room, between the ceiling and the roof, and directly in the middle. The shades are operated by a cord at each end of the room. The one which controls the front shade, may be seen in the corner of the room by the bracket.

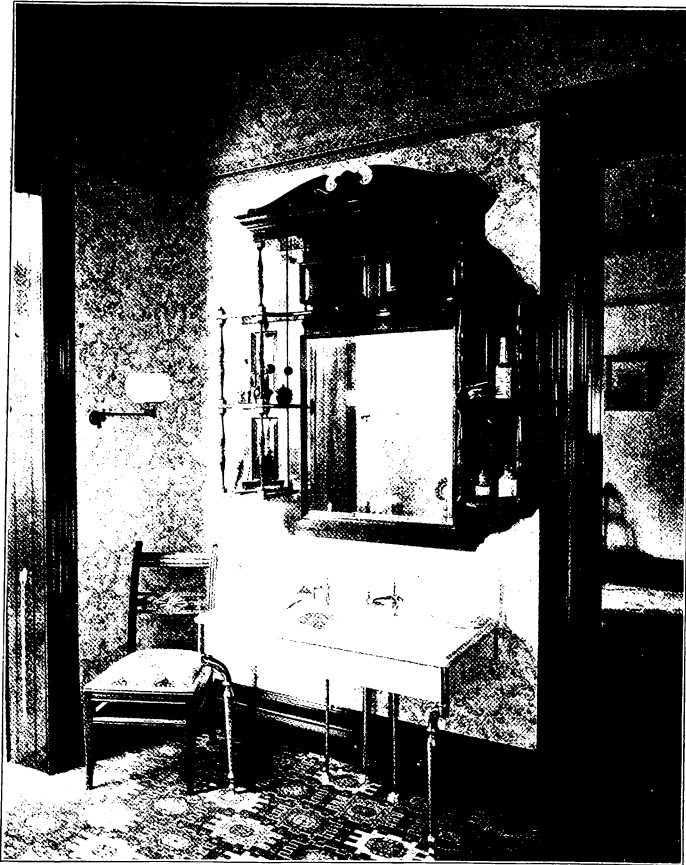


FIG. 5.

By the use of these shades which are hidden from view, the light can be regulated at will. After trying many different colored shades, I found that a light green answers best. The front windows let down in pockets, and in summer with all the windows open, the room is as cool as if no glass were used in roof or ceiling.

The cabinet has, as will be seen by referring to the illustration, a great array of drawers. At first one wonders if they can all be used.

I venture to say that the busy man would have them all in use within a month. "A place for everything, and everything in its place" facilitates operations greatly. The plate glass sliding shelves are a great convenience. They can be readily cleansed and when not in use can be pushed back into pockets provided for them. This cabinet is so arranged that I can reach every drawer and medicament in the case, without leaving the side of the chair. The shelves in the medicine case are of glass. The upper ones are designed to hold models of regulating cases. By



FIG. 6.

writing the name on the bottom of cast, it can be readily seen from underneath and easily reached when required. At the end of the series of small drawers is an open space, which contains an electric heater for warming water. It is so arranged that the water is always the same temperature. Underneath this open space is a closet for soiled linen. The upper door has spring hinges, which allows it to close automatically. The two lower doors are easily cleansed and made antiseptic. The little shelf or table under the window gives ample room for appointment book, journal, etc.

The dressing room shown in Fig. 5 is between the two operating rooms and easily accessible from either. Fig. 6 shows a section of the reception rooms on the first floor. The rear room contains the desks of the secretary, typewriter, etc., and is really the business room of the establishment. The secretary can easily see any one entering the other reception rooms from the hall. This entire floor I reserve for my own personal use.

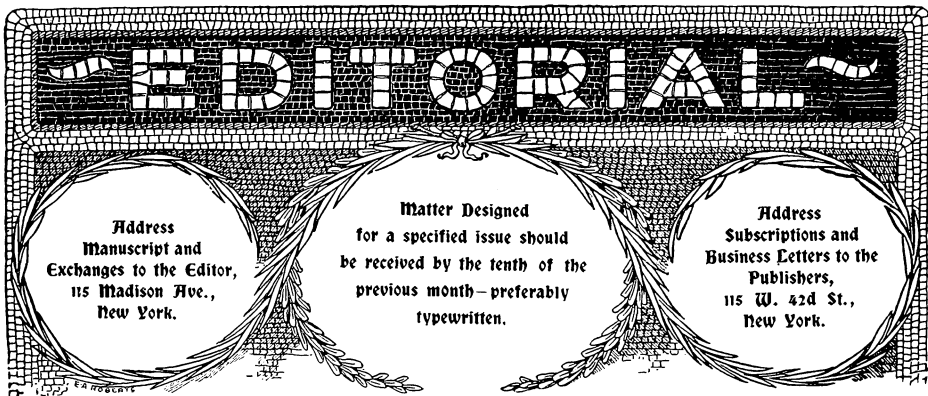
On the second floor is arranged another suite of rooms for my associates, each supplied with an electric engine, good light, etc. This floor has also its own corps of assistants. By a series of signals everything is kept in smooth running order. As patients enter the lower hall, the door attendant ascertains who is wanted, and on being informed directs them to the proper reception room.

The laboratory is under the operating room, and is well lighted. This is about fifteen feet square. I have given much thought to the arrangement and have it, I think, so planned that all kinds of mechanical work can be easily and thoroughly done. It is fitted out with one-half horse electric motor, which gives abundant power for all requirements: an electric furnace for continuous gum work; compressed air for soldering; plate glass tables for plaster work, which, by the way, are excellent; and open flue and hood in which to do vulcanizing; cabinet and drawers for all surplus stock, etc. There are no more odors here than in the reception room. By system, order, and trained associates, more can be accomplished and can be done better, in less time, and with less expenditure of nervous force, than where system and training has been neglected.

My experience with this kind of light, in the operating room above described, exceeds my most sanguine expectation, and the system of ventilation herein outlined is eminently satisfactory. There is a freshness about the room that dispels weariness to a grateful extent. If any reader of *ITEMS OF INTEREST* should desire more detailed information than is set forth in the above, I should be pleased to give it. I would just mention here that the kind of glass found best for the ceiling, is that kind known to the trade as "White Ondoyant." The glass in the roof is the same as is usually used in skylight work.







## **An Appeal to Congress in Behalf of Dentists.**

This is the New Year. This is time when man makes new resolutions for the future. New forces, new ambitions, new hopes energize his being. The time then is opportune for a united effort, on the part of all the dentists of this country, towards the eradication of an evil under which we have all suffered throughout this century. May we not hope that by a concentration of endeavor we may have a law enacted before the dawn of the approaching century, which will enable the dentists of the twentieth century to escape the harassing demands of the patent sharks of the nineteenth?

Elsewhere in this issue, will be found a report read by the Correspondent of the New York State Dental Society, at its last annual meeting. A circular letter was addressed to the presidents of all the State Societies in the country, asking for an expression of opinion as to the desirability of appealing to Congress for an amendment to our patent laws, which would make the evils of the past impossible in the future. The report gives the replies from all these states, and the consensus of opinion was favorable to the undertaking. A number of the societies have since held their annual meetings and have appointed committees to co-operate with the committee appointed by the New York Society. These are reported in the department of Society Announcements.

The movement, then, is inaugurated by the several State Dental Associations of this country, and must in no manner be considered as the

enterprise of this magazine. It is common experience, however, that legislation, especially National legislation, is not easily obtained, and the several committees which have been appointed, living in widely separated sections so that meetings would be impracticable, could accomplish little, except as they co-operate with a single director, by pushing the work and seeking influence in their own states. This then is the plan. The New York State Society has authorized its committee to proceed. That committee has decided to obtain, if possible, a petition signed by the dentists of the United States, which is to be presented to Congress during the present session. To facilitate this work, the pages of *ITEMS OF INTEREST* are placed at the disposal of the committees of the State Societies.

In the forepart of this number, will be found a page on which appears a copy of the present section of the Patent Law, together with the proposed amendment. It is desirable that each reader should remove this leaf, sign it, and forward at once to Dr. Ottolengui. Subsequently these leaves will be bound together in book form and presented to Congress as the petition of the Dental Profession of the United States. Additional blank petitions have been sent to the several committees already appointed, and it is urged that other committees be appointed by local societies, who would undertake to obtain signatures to the petitions. Upon application, blanks will be sent to any local society, or to any dentist who will canvass his own neighborhood. It is not impossible that this project will fail. It may be that the dentists, while admitting that patents which enable their holders to exact license fees, or royalties, are bad, yet are too busy, or too indifferent to their own welfare, to take the brief time required to sign and mail the petition. Should failure come through such a cause, the fault will not be with the committees, but rather with the profession at large.

**The  
Proposed  
New Law.**

It will be well, therefore, to thoroughly comprehend the situation and to understand just what it is that we are seeking. It was a singular fact that Dr. J. N. Crouse, who was present when the subject was discussed by the members of the New York Society expressed at that time the opinion that such an appeal to Congress would be unnecessary, because that class of patents are invariably de-

clared invalid when tested in the courts. Let us analyze that statement. The dental profession has been annoyed in the past by patent holders, notably by the Rubber Company, and in more recent times by the Tooth Crown Company. To fight the latter the Dental Protective Association was formed, several thousand dentists contributing ten dollars each, and agreeing to a future assessment of ten dollars more. Dr. Crouse has ably managed the Protective Association. He has fought the Tooth Crown Company at all points and at all places. He has undoubtedly in this manner saved the profession thousands of dollars, to say nothing of the annoyances that would have existed had the Tooth Crown Company flourished. At the very time when Dr. Crouse told the New York State Society that we do not need the suggested legislation, "because such patents are invalid anyway," it was also stated that unless more men joined the Protective Association very soon, the second ten dollar assessment would become a necessity. The question naturally arises, "Why? If patents such as have proven annoying to dentists are invalid, why do we need a Protective Association?" Simply because, though they are declared invalid when tested in court it costs money to test them in court. Undoubtedly if we had not the Protective Association, there would be literally hundreds of men peddling patented processes and exacting royalties or licenses.

If, as Dr. Crouse tells us, these patents are invalid, is it not manifestly wrong that the United States Government should issue them? Is it not a hardship that the dentists should be compelled to prove their invalidity in court? Is it not likewise unjust that the United States should issue to a man a patent which will become invalid as soon as attacked? The wrong is a double one, and the remedy consequently doubly requisite. It is to be earnestly hoped that when this petition does reach Congress, it will have the powerful support of the Dental Protective Association. It will be less costly to forever prohibit the issuance of these patents, than forever to be forced into legal litigation in protecting our interests.

**The  
Objectionable  
Patents.**

There must be no confusion in the mind in relation to the class of patents which we wish to see abolished. Whatever may be honestly invented, and subsequently manufactured and sold, is a legitimate subject of patent. Even a method or process may

be properly patentable, where it is a method or process of manufacture, the product being placed on sale at a common price to all. Thus, a method of constructing a tooth crown may be justly patentable, where the method results in a manufactured crown placed on sale. But where a method of producing a tooth crown is merely to be imparted to the dentist, and the dentist is then expected to make his own tooth crowns, applying the method to each case, and in each case adding his own skill in the application of the method in order to overcome special obstacles, that is not a just subject of patent. No patent of this character should be granted empowering the holder to exact a license or royalty for the use of the same.

It is thought, however, that the language of the proposed amendment is sufficiently definite.

<b>Wording of the Law and of the Amendment.</b>	Section 4886 of the Patent Laws reads as follows: "Any person who has invented or discovered any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement thereof, not known or used by others in this country, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof, and not in public use, or on sale, for more than two years prior to his application, unless the same is proved to have been abandoned, may upon payment of the fees required by law and other due proceedings had, obtain a patent therefor."
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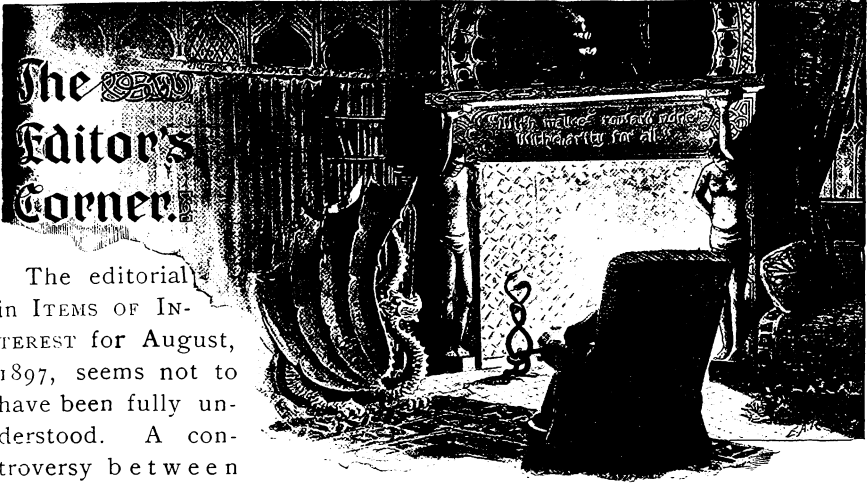
The proposed amendment makes the above section continue thus: "But no patent shall be granted upon any process or method of treating human disease, nor upon any process or method of restoring or replacing any lost part of the human body, except upon artificial substitutes, whole or in sections, which may be manufactured, sold, and delivered without the exaction of any fee, license or royalty beyond the common selling price of the manufactured articles."



## The Editor's Corner.

The editorial in ITEMS OF INTEREST for August, 1897, seems not to have been fully understood. A controversy between the Faculties and

the Examiners Associations was in active progress at that time, and in view of the approaching meeting at Old Point Comfort it seemed to be proper that a review of the situation should appear in this magazine. The endeavor was made to consider the facts impartially and justly, with the result that the editorial in question rather favored the Examiners. Since that time numerous letters from college deans have reached this office, from the general tenor of which the deduction must be made that the writers have imbibed the idea that I am opposed to the colleges, and have set myself up as a champion of the Examiners. No notion could be more erroneous. Our college system must be our final dependence for future professional prosperity. In the very editorial in question the point was plainly made that the introduction of Examining Boards had proven disastrous in many ways. Worthy members of the dental profession have been harassed, while the charlatans have not been excluded from practice, but on the contrary flourish more openly than ever before. It may be as well to have this matter straightened out before misapprehension proceeds further. This magazine is to be, and is absolutely independent. Its policy is to represent the best interests of the whole profession, and it will not become the advocate of any special sect, whether State Examiners, College Faculties, or Dental Associations. Whatever seems right will be enunciated regardless of who is made to appear in the wrong. Last August the Examiners seemed to be in the right, and though other magazines took an opposite view, ITEMS OF INTEREST unhesitatingly lent its influence to the Examiners. The subsequent occurrences at Old Point Comfort more than warranted this action. Whenever the Examiners shall seem to be acting prejudicially to the



interests of the dental profession, they may expect adverse criticism in these pages.

**Illiteracy  
of State Dental  
Examiners.**

One of the college deans who has honored me with some correspondence relating to the controversy between the two bodies, informs me that he has in his possession letters written by State Examiners, far worse than the specimens published by Dr. Carleton Brown in the *ITEMS OF INTEREST* for August last. Immediately a reply was sent requesting a copy of the letters that they might be published. If there are examiners who are as illiterate as were the young graduates from whose examination papers Dr. Brown quoted, the sooner we know their names, the sooner will more suitable men be found to take their places. The dean declined to furnish the letters for publication, adopting the theory that such a course would be unwise; that "it is a dirty bird that fouls its own nest." The phrase is trite, but not fully applicable. We might remodel it and say, "It is the dirtiest kind of bird who permits the filth to remain in its nest." We cannot clean house unless we know where the dirt is.

Many men gain the reputation of having knowledge which they do not possess. Many others have the gift of talking fluently in meetings who may not be able to write out an English sentence of twenty words grammatically and orthographically correct. It is not inconceivable that such men might receive appointments upon Examining Boards, their electors being unaware of their ignorance. Make the facts known, and possibly new men, and better, will replace the ignoramuses. Whenever evidence is submitted to us tending to prove Dental Examiners are unfit to be censors over young graduates, it will be cheerfully published. Meanwhile Dr. Jarvie, in the course of the discussion before the Central Dental Society of New Jersey (reported in this issue) gives us some additional examples of "dentistry as she is comprehended by young graduates."

**Encouragement of  
High Preliminary  
Standards.**

At Saratoga in 1896 the Faculties Association adopted, practically the legal standard of the colleges in the State of New York. In 1897, at Old Point Comfort, this action was reversed, a much lower standard being permitted. We have received no evidence that the New York delegates to the Faculties Association made any energetic opposition to this retrogressive step. Yet the New York State schools are the chief sufferers, because their standard is regulated by the laws of their state. What is the consequence? It is a fact that twenty applicants for admission at one of the New York schools were excluded because of their inability to reach the Regents' require-

ments. All of these men are attending college—*elsewhere*. That is a loss to that school of twenty times three years tuition.

The news from New Jersey, therefore, will be gladly received in the New York schools. The dentists of that state, recognizing that one of the evils of the present system of State Boards, is the unjust examination of competent men, and the consequent debasement of the college diploma, are about to seek an amendment to their present dental law. The new law, if passed will admit to practice, *without further examination*, all students graduated from schools whose preliminary requirements are as high as those of the colleges in the state of New York. This is a generous and patriotic move in the right direction, and if all other states would follow this wise example, within a very brief period of years the standard of dental education would be much higher, and the college diploma would be restored to the high place which American diplomas once held, and become acceptable to communities throughout the world.

**A**  
**Non-Secret**  
**Obtundent.**

At some of our dental meetings in the past professional men have reported that certain combinations of drugs would prove efficacious in alleviating the sensitiveness of dentine. Many present have listened, perhaps without hearing, and have failed to profit; yet subsequently these same men have purchased the identical combination of drugs, which some more attentive tradesman has in the interim, prepared, bottled, labeled and freely advertised under some name, often as misbegotten as was the knowledge which he received gratis and vends for cash. To those who may prefer, as all should, to prepare their own obtundents, and to apply in the mouths of their patients only such remedies as are known to them, the following communication from Dr. Clyde Payne may prove of interest:

"In the discussion of the Stomatological Club which appeared in the August number of the *ITEMS OF INTEREST*, there was a mention made of an obtundent, which I use for sensitive dentine, and an error was made in the report. The formula should include, carbonate of potassium, instead of chloride of potassium. As I have been in receipt of many communications regarding the obtundent, I will describe the method of its preparation and application. I make a saturate solution of carbonate of potassium and glycerine; then I make a saturate solution of cocaine and carbolic acid, and mix the two together on a warm glass slab. I then proceed as follows: Apply the rubber dam, dry the cavity out thoroughly with alcohol and a continuous hot air blast. Then apply a drop of the obtundent, and again apply the hot air blast as warm as the patient can endure comfortably, continuing it for five minutes, at the end of which time the tooth may be excavated quite painlessly. I am indebted

to Dr. M. Levcowitz for the suggestion of carbonate of potassium and glycerine, he in turn, I believe, to Dr. J. Foster Flagg. Combined as described with the cocaine and carbolic acid it gives a very much better average result than I am able to obtain by cataphoresis."

**Thorns  
For Filling  
Root Canals.**

Dr. L. G. Noel, of Nashville, Tenn., sends the following communication in which he describes a unique method of filling root canals:

"I send you some thorns from the prickly pear, a plant that grows abundantly among the limestone rocks in Tennessee. You will observe that they are very slender, flexible and tough. They are so shaped as to be exactly the right form to close a normal root canal. Again we have a numerous assortment of sizes, and can easily obtain thorns suitable for the small buccal roots of the superior molars or large ones suitable for the palatal canals of same teeth, and for the large canals of cuspids. I have been trying them, and I am much pleased. My method has been to prepare and dry the canals as for other root fillings, then fill the apex of the canal with a solution of gutta percha and aristol in chloroform. This I make by dissolving fifty grains of aristol in an ounce of chloroform, then adding red gutta percha until thick as cream. After placing this in the apex of the canal in the usual way, the selected thorn is taken up, and its outer layer is severed by running round with a sharp knife at the point where it is desired to have it break off. With a light tap of the mallet it is driven up, and twisted off. These thorns may be soaked in creosote before using them, and a suitable broach carrier may be used to carry them to place and to bring them under the mallet. Believing that these things must be seen and tried, to be fully appreciated, I send you some, and beg that you tell your readers about them after trying them in practical cases."

**A  
Resurrected  
Dental Poem.**

Poems not infrequently get into the waste basket, and it may be of interest here to record that between the waste basket and some manuscripts, there appears to be the same occult attraction as exists between a magnet and a steel needle. But it is rare indeed that a poem ever gets out of the waste basket and into print. Yet here is such an instance. The following poem was observed peacefully reposing in the aforesaid wicker receptacle. By some unexplainable impulse it was taken up and scrutinized. The result was something of a shock. It was never intended that this poem should so go astray. It reached this office months ago; so long ago in fact that it is impossible to discover what kind friend sent it. During its residence in a pigeon hole in some mysterious manner it has become divorced from its attendant envelope and accompanying note of transmittal. The author therefore is unknown. Perhaps even it may have been published before. In short nothing is at present known of its origin, or ancestry. Here it is,



to appeal for itself for popular approval. And now I note that it has not even a name, so one is supplied:

### **The Edentulous Infant (or Flo's Baby Brother.)**

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A sweet little baby brother  
Had come to live with Flo,  
And she wanted it brought to the table  
That it might eat and grow.  
"It must wait for awhile," said grandma,  
In answer to her plea,  
"For a little thing that hasn't teeth  
Can't eat like you and me."  
"Why hasn't it got teeth, grandma?"  
Asked Flo in great surprise.  
"Oh my, but isn't it funny?  
No teeth, but nose and eyes."  
"I guess," after thinking gravely,  
"They must have been forgot.  
Can't they buy him some like grandpa's?  
I'd like to know why not."  
That afternoon to a corner  
With paper and pen and ink  
Went Flo saying, "Don't talk to me,  
If you do you'll 'sturb my think.  
I'm writing a letter, grandma,  
To send away to-night,  
An' 'cause it's very 'portant  
I want to get it right."  
At last the letter was finished  
A wonderful thing to see,  
And directed to God in heaven.  
"Please read it over to me,"  
Said little Flo to her grandma,  
"To see if it's right you know."  
And here is the letter written  
To God, by little Flo.  
"Dear God: The baby you brought us  
Is awful nice and sweet,  
But, 'cause you forgot his toofies,  
The poor little thing can't eat.  
That's why I'm writing this letter  
A purpose to let you know,  
Please come and finish the baby.  
That's all.— From Little Flo."

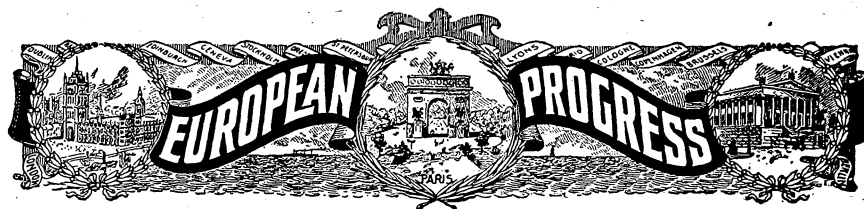
**The Davis  
Shoulder Pin  
Crown.**

The most recently introduced all-porcelain crown is the Davis Shoulder Pin Crown. In it the hole to receive the dowel extends only part way into the crown and is countersunk to receive the shoulder of the dowel. The peculiarities of the dowel are this shoulder which is near its lower end, and the somewhat dumb-bell-shaped termination at the end which passes into the crown. The crown is concave at its base which facilitates adaptation.

While grinding the crown to fit the dowel is placed loosely in the root, and when the fitting has been completed the dowel is cemented into the crown, and afterward crown and dowel together are similarly cemented into the root with zinc phosphate. When in position it somewhat resembles the Logan crown in presenting to view nothing but porcelain. The dowel not being subjected to heat of any kind can be made of a union of metals that affords greater stiffness than pure platinum possesses.

Whilst this crown has not been in the market long enough to be thoroughly tested, it certainly seems to possess qualities of adaptability, strength and appearance far-excelling those of other ready-made crowns now in use. Dr. S. H. Guilford in *The Stomatologist*.





## Value of Examination of the Mouth in the Choice of a Nurse.

By DR. V. JARRE.

*Reported by George Randolph, Berlin, Germany.*

Doctors and midwives are usually guided in their choice of a wet-nurse by several general considerations, amongst which there is one, the value of which has hitherto not been sufficiently appreciated, viz., the examination of the mouth.

Mauricean, who is even to-day an authority on such questions, demands a nurse whose mouth is absolutely healthy; whose teeth must be white and sound without any caries, because in kissing the child constantly, she would infect its lungs by making it breathe her foul breath. Every wet-nurse ought to present herself with a mouth in perfect condition.

But it is well known that the dental caries is very frequent in our white race, and there are in France for example, vast regions where the complaint is so common that one very rarely finds a young woman with all her teeth sound.

The presence of one or more carious teeth does not constitute an immediate danger of inflammatory and septic complications. However, such teeth may be the seat of painful sensations, produced either by the contact of hot or cold food, or by the pressure of some hard food entering the cavity, during mastication. Such accidents may bring on a more or less pronounced functional disturbance, affecting the nurse's milk. Moreover it is well known that the period of nursing, as well as that of pregnancy, predisposes the advance of caries in quite a peculiar manner.

The conclusion to be drawn from these considerations, is that treatment of all caries, followed by filling of the cavities, ought to be imposed upon every wet-nurse, who suffers from dental lesions either at the beginning or during the course of nursing.

## Formagen.

By Dr. ABRAHAM KONITZ.

*Reported by George Randorf, Berlin, Germany.*

Formaldehyde is derived from methylic alcohol, out of which it is obtained as a colorless, odorous gas through incomplete oxidation. Through the researches of myself, Dr. Lepkowski, Krau and others, it is known that formaldehyde has such an effect on an inflamed pulp that the affected tooth can be filled at one sitting. It is used as an aqueous solution of forty per cent. A piece of cotton saturated with this solution, is applied to the inflamed pulp. By this treatment the desired effect is obtained, but the method is faulty in that the formaldehyde solution causes in the pulp, as well as mucous membrane, very severe pain for several hours. Dr. Lepkowski recommends this method only in cases where lack of time demands it.

Hence the question arose, how to obtain the desired result without pain. Many experiments followed, and Lepkowski assures us that weakening and mixing with cocaine is ineffective. After a series of experiments, I found that the required result could be obtained with pure liquefied carbolic acid, which has the property of uniting clear with the formalin in every form.

After long experiments, which I ended in the spring 1895, and which brought no satisfactory result, I tried and made use of formaldehyde in the treatment of roots. I prepared a very spongy cement, such as is commonly used for the capping of inflamed pulps. After many trials, I found a cement especially fit for the purpose, which contains marble and eugenol. In both fluid and powder, the freshly produced formaldehyde is introduced while the two are kept separate. By mixing this fluid and powder on a glass slab, the putty like paste called Formagen is obtained. This is applied to the exposed pulp or, if it is still covered, over the softened dentine. The most violent pulpitis ceases in a few minutes, and the parts harden in about five minutes, so that the tooth can be filled with cement or amalgam.

In the course of somewhat over nine months, there have occurred more than a thousand cases of such teeth which have been successfully treated with Formagen, so that they were filled permanently at one sitting. It is asked if the teeth so treated have been preserved with pulps dead or alive. This question is answered by the fact that the pulp after four or six weeks treatment with Formagen fully recovers and thence-

forward performs its normal functions. In teeth which have been treated with Formagen, the fillings as well as the layers of Formagen have been removed, and in every case the exposed pulp has responded with normal sensitiveness.

It is daily asked in what manner the Formagen acts upon the teeth. To this question there cannot yet be any definite answer; but the theory so far as it has been determined is as follows: the pulps covered with Formagen are influenced first by the eugenol, and also by the carbolic acid contained in the fluid, which thus deadens the pain. And during the action of the eugenol, the formaldehyde passes gradually out of the Formagen and penetrates into the pulp, and changes the same in a small region around the exposed place. The developing gases and fluid from the pulp chamber are absorbed by the porous putty. And from the effect of the formaldehyde the pulp becomes hard and tough. The parts of the pulp not affected, meanwhile act normally; and from this fact, and from the action of the formaldehyde upon the pulp, it becomes, for the first days after application of Formagen, inactive, but in a few weeks is restored to its normal functions.

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### **Tonic Cramp of the Upper Extremities in Consequence of an Injury to the Pulp.**

*Reported by George Randorf, Berlin, Germany.*

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Every practitioner confirms the assertion that toothache often brings on neuralgia. Baume records many cases, partly from his own experience, which make it evident that disturbances occur in the sensory as well as motor tracts extending to the nerves of the face, the arm, and the whole body, or one-half of the body, caused by toothache.

Among the motor disturbances of the whole system are epilepsy, chorea and tetanus. In the face, we have only clonic and tonic cramps of single groups of muscles; also paralysis; in the arm they appear as paralysis combined with neuralgia, which disappear after the extraction of the diseased tooth.

In all these cases it was more or less a supposition, or a fact depending upon cure only, that the disturbance was caused by toothache. Dr. Salomon, of Hamburg, now publishes a case, in D. M. of Z., where the nervous trouble arose during a difficult extraction, under the eyes of the dentist and disappeared again.

"A robust, strong man of twenty-nine, who was not in the least nervous, suffered from toothache, caused by an exposed pulp in the upper left wisdom tooth. I determined to extract it, as it was much decayed. During repeated attempts at luxation of the tooth, which was fixed very firmly, the forceps slid off and struck directly into the pulp.

"There was at once a tonic cramp of the flexor muscles of all fingers on both hands. Especially the left hand was closed so tightly that the patient could not open it, whilst he had some difficulty in opening the right. The flexibility of the arms was also affected. Patient describing his condition said that he felt as though a very strong electric current passed through his head and arms, or as if the latter had pins and needles in them; a painful condition which caused the patient, usually showing great powers of endurance, to groan pitifully. I applied some concentrated carbolic acid to the pulp, whereupon the cramp gradually ceased. When I succeeded in extracting the tooth, the patient was quite normal and could follow his business undisturbed all day long."

This case furnishes a striking proof that quite distant parts of the body can be made to suffer a nervous reflex from injuries to the nerve of a tooth.

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### **New Operative Method for the Radical and Rapid Cure of Chronic Empyema of Maxillary Sinus.**

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*Reported by George Randorf, Berlin, Germany.*

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Mr. Luc, after having reminded us that the radical cure of the malady in question is one of the most difficult in rhinology, attributes the frequent failures of the different nasal and buccal operative procedures, to the former, allowing an insufficient means of reaching the seat of disease, and to the latter keeping this in too prolonged communication with the mouth, thereby exposing it to fresh infection. He has avoided the inconvenience of both these proceedings, and has united their advantages by the following method:

1. Free opening of the maxillary sinus, through incision of the gingival mucous membrane with the bistoury, at fifteen millimeters over the neck of the teeth, stamping of the mucous membrane with a rasp, and resection of the greatest part of the outer wall of the sinus;
2. Careful removal of all fungus in the sinus by means of electric cautery, and cauterizing with a strong solution of chloride of zinc;

3. Establishing, by means of chisel and mallet, of an orifice of communication between the sinus and the nasal cavity at the level of the lower part of the inner wall of the sinus;

4. Introduction of a drainage tube through the artificial opening; the tube is held in the cavity by its widened end, and emerges at the other end, through the nostril;

5. Reunion of the buccal wound by means of fine catgut, after the cavity has been well powdered with iodoform.

The buccal wound is cicatrized after three days, and the seat of the disease thus protected from the danger of buccal infection, is no longer in communication with the outer air except by the nose. During the following days the sinus is kept antiseptic by the drain, by means of injections of ethereal iodoform, and irrigations with solutions of formal or boric acid. After a fortnight the drain is withdrawn from the nose by a slight traction, and the cure is complete.

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## Swallowed Teeth.

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*Reported by George Randorf, Berlin, Germany.*

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A man of twenty swallowed during sleep a vulcanite plate four centimeters wide and three centimeters long, with four bicuspid teeth and two molars. Violent fit of suffocation. A probe slid easily through the whole œsophagus and touched the strange body. The touch made the plate glide deeper, so that it could not be felt. Two days later it came out *per anum* without pains.

A plate of vulcanite four and one-third centimeters wide and two and two-third centimeters long with four bicuspid teeth was swallowed by a woman of twenty-nine years, during sleep. Pains in the windpipe. Behind the windpipe the strange body could be felt. In the attempts to get it up higher, it slid down deeper and was pushed into the stomach. Came out with feces two days later.

A signal man, standing with his horn in his mouth, received a blow which made the horn strike against his plate, and this slid down the œsophagus. In the attempt to catch the plate with a coin catcher, it glided down into the stomach. Forty hours afterwards it came out *per anum*. It consisted of a metal plate four and one-half by one and one-half centimeters, with two teeth and four clasps.

Rosenheim reports the following case: A workman twenty-four years old swallowed his artificial teeth whilst drinking. Immediately violent pains. The probe met resistance, but later the plate slid down into the stomach. The same pains. A few days later application of the probe again met resistance. Rosenheim saw the plate in the œsophagus. Attempts at extrication were made in vain for an hour. Œsophagotomy. The foreign body stuck so firmly that the teeth could not be extricated as a whole, but had to be smashed. The plate consisted of four teeth and had pointed clasps.

Franken reports the following case: A woman of fifty had swallowed her artificial teeth during the night without noticing it. Suddenly she had great difficulty in breathing, followed by cyanosis. A physician diagnosticated the case as one of œdema of the lungs. The pain in breathing passed off, till the following day, and the patient was only complaining of pain in her throat and when swallowing, which, however, greatly increased during the day. Quite by chance her son noticed that his mother did not have her artificial teeth in her mouth, and caused the doctor to make a digital examination of the throat. He succeeded in getting out the denture consisting of seven teeth, which had stuck in the windpipe.







## **A Manual of the Injuries and Surgical Diseases of the Face, Mouth and Jaws.**

By JOHN SAYRE MARSHALL, M.D. (Syracuse University). Former Professor of Dental Pathology and Oral Surgery and Emeritus, Professor of Oral Surgery of the Dental Department of Northwestern University, etc.  
Philadelphia, The S. S. WHITE Dental Mfg. Co., 1897.

Dr. Marshall has, for a long period, enjoyed an enviable reputation in the city of Chicago, not only as a teacher of oral surgery, but through his practical work in this direction.

His plea for an advance in the methods of teaching students from the old system of purely didactic lectures, is one that should meet with a hearty response from every person interested in the advancement of medical and dental education. It is the duty of the teacher to learn how fully his students grasp the scope of the subject taught them; not by their examination papers at the close of the term, but week by week as he passes from one subject to another. Such an advanced method not only redounds to the benefit of the individual student, but it is bound to cause an increasing improvement in the teacher's method of presenting his subject.

At the close of each chapter is found a series of questions systematically reviewing the substance of the chapter. While individual lecturers may not adopt in detail the method as here presented, it presents to them a systematized work of such value that it is bound to be a very great incentive.

Dr. Marshall is entitled to the highest praise for what he has here offered to us. He is especially to be commended for his classifications and systematic manner of treating every subject. All our dental writers are more or less lax in this regard. The book from the publisher's standpoint, is a magnificent product; faultless type, fine paper and superb illustrations.

The most general criticism which the book will meet will be that it has too little of dentistry in it; to illustrate this, there are twenty-seven pages on "Congenital Fissures of the Lip and the Vault of the Mouth,"

and twenty-two lines suffice in which to allude to "mechanical treatment."

It is unfortunate that the author has so materially abbreviated the dental portion, because there is an urgent demand for better education of the medical student in dental matters. In this worthy cause, Dr. Marshall's volume will do effective work, but we perceive how much more effective it could have been made if purely dental matters had received more elaboration.

It is impossible for us to go into any detailed criticism of the work. Its faults are mostly those of omission, but the fact remains that medicine and dentistry are both the gainers by the existence of such a work. Consequently we can congratulate ourselves that the book is the product of a dentist, even though he has attached to his name the degree of M.D.

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### **American Text-Book of Operative Dentistry.**

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In Contributions by Eminent Authorities. Edited by EDWARD C. KIRK, D.D.S.  
 Illustrated with 751 Engravings. 800 pp. 702. Lea Bros. & Co.,  
 Philadelphia and New York, 1897.

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**Contribution of**  
**Edwin C. Darby, M.D.,**  
**D.D.S.**

Chapter X describes "The Operation of Filling Cavities with metallic Foils and their several modifications." This is written by Dr. Darby, the Professor of Operative Dentistry at the University of Pennsylvania. For many years he has ranked as one of the leading operators in Philadelphia, and with his established reputation for the insertion of faultless gold fillings, it was to be expected that this chapter would be committed to him.

The young student will find no chapter more entertaining than the thirty-seven pages devoted to this subject. The major portion thereof treats of the uses of gold, the only part which we will consider. The difference between non-cohesive and cohesive gold is thoroughly expounded, and the great value of the proper use of non-cohesive gold in certain places and at certain stages of an operation is fully explained. In speaking of cohesive gold, we feel like emphasizing the caution given as to keeping such gold always so secure that it should never be polluted by any atmospheric gases. This caution also applies to the extreme care required in handling the gold itself, that it shall never come into contact with the fingers or any substance that will lessen its cohesive property. For the best means of annealing gold, the author illustrates the Custer annealing tray. The variations in type of pluggers used for non-cohesive and cohesive are made plain, and we agree entirely with

the statement *that cohesive gold is packed as well with smooth points as with rough ones.*

In describing and illustrating the various forms of mallets, the author has strangely forgotten to give any place to the pneumatic mallet. A mallet of this type recently introduced by Dr. E. S. Marshall, arranged with an adjustable angle, is one that should not have been omitted from this list.

The author describes the method of filling different cavities in detail, adopting the same classification of cavities as is set down in Chapter VI.

Some differences of opinion as to methods of procedure between different operators will always arise, but Dr. Darby has so many monuments of his skill in the mouths of Philadelphians, that no one can question the possibility of attaining success by closely following his instructions. We do feel that for a text-book for students, his directions as to filling disto-occlusal cavities of bicuspid and molars are given without the caution one would expect as to the use of the matrix. Students should certainly be taught to fill these cavities *without* a matrix before being allowed to use them.

Neither can we agree with the manner in which the matrix is recommended to be used, as the most efficient and time saving. We refer to the statement that the matrix should at once, if possible, be held securely in position and not disturbed thereafter until filling is completed. Many good operators find they can obtain far better results by completing and thoroughly finishing the cervical portion of the filling before placing the matrix in position. As the object of the matrix should be to assist in restoring the contour, no value can be obtained from it until that part of the filling is reached where contour restoration is demanded, and then if the matrix is readily removable so that the work can be kept under constant observation, much time may frequently be saved in finishing the filling. In starting fillings exclusively of cohesive foil, the author speaks only of starting pits and grooves. There can often be used much shallower and with great advantage to the preservation of the pulp and cervical margin by placing either a minimum amount of very thin oxy-phosphate or a drop of Canada balsam in the bottom of the shallow groove. The chapter closes with the most explicit directions for the proper finishing and polishing of fillings. How frequently reader, has the arrival of the hour for the next patient prevented you from properly finishing a filling? "And by your works ye shall be judged."

(To be continued.)

### About Children.

Six Lectures given to the Nurses in the Training School of the Cleveland General Hospital in February, 1896. By SAMUEL W. KELLEY, M.D., Professor of Diseases of Children in the Cleveland College of Physicians and Surgeons (Med. Dept. Ohio Wesleyan Univ.); Pediatricist to the Cleveland General Hospital; Consulting Physician to the Cleveland City Hospital; President 1896 and 1897, Ohio State Pedriatic Society; Editor *Cleveland Medical Gazette*. 180 pages. Price in buckram, postpaid, \$1.25 net, Cleveland. The Medical Gazette Publishing Company, 1897.

This is a very interesting little volume of one hundred and seventy-nine pages, and gives some information that would prove quite valuable to dentists who handle children.

The lecturer makes use of the customary poor form of nomenclature in speaking of dental matters. He makes amends for this by his logical destruction of the popular fallacy that the teeth of children are frequently injured by medicines, when he correctly states the teeth troubles are due to the illness and not to the medicine.

There is a very complete index appended, which is always of great value in such a book.

## CORRESPONDENCE

### Professional Courtesy.

DEAR DOCTOR OTTOLENGUI:

The primary idea of a "profession" is a calling or occupation based upon an individual subscription to, or profession of the formulated and duly certified principles of the specific calling in which the particular professor has been educated and qualified. Hence a member of a learned, or highly educated calling, and he or she only, is strictly entitled to the honors, privileges, and considerations of that profession. There is a further and consequent recognition of fellowship between members of the several professions that appropriately supplements the fraternal feeling between members of the same profession. It follows that the calling relations and intercourse of gentlemanly professors will be characterized by an altruistic courtesy every way estimable and admirable.

Dentistry is among the later additions to the growing list of professions consequent upon the widening range of systematized and applied learning, and it is a source of gratification to note the increasing associative recognition of the allied and adjuvant professions.

This is obvious in the exchange of text-book and journalistic literature, and is especially noteworthy in the comities of professional practice, particularly so in the sub-departments termed Special, which have given rise to large classes of Specialists.

The writer in a long course of dental practice has had frequent experience of the ready interchange of professional services, and even in later years, while withdrawn from actual practice, yet continuing in contributory service, the ever courteous confrerety is still no rarity, but abounding and spontaneous on every needful occasion. These reflections and reminiscences have given rise to the desire to direct attention to the growth of the professional spirit among dentists, and some concrete examples will give practical point to the foregoing observations.

For instance, read the review of the American Text-Book of Operative Dentistry by Dr. Wilbur F. Litch, in the October *Dental Cosmos*, and consider the circumstance that Prof. Litch is the editor of "The American System of Dentistry," a text-book competitive of the reviewed work; and also note the fact that Prof. Litch is a member of the Faculty of a dental college, and Prof. Kirk the Dean of another in the same city. Is not that appreciative and complimentary review a charmingly courteous and creditable contribution to the literature of true professional comity? To be sure your own review of the same work is a like instance of altruistic courtesy, such as would be expected from the writer's experience of your editorially courageous consideration: witness also the correlated editorial on "Four Classes of Dentists" in the current number of *ITEMS OF INTEREST*. That is a manly, timely utterance from the high plane of a loyal professional standard bearer. Would that our now numerous dental educators might confer diplomas only upon graduates whom they could confidently expect to maintain the noble character of true professional gentlemen. One other instance in the person of Prof. James Truman will conclude the present illustrative citation of honorable dental examples of altruistic professional courtesy.

The divine doctor declared: "He that humbleth himself shall be exalted," and the professional paradox is pleasurably surprising when courteous unselfishness glorifies the self.

W. S. H.

Philadelphia, November 19, 1897.



At the request of the Correspondent of the New York State Dental Society, various other State societies have agreed to co-operate with the New York Society in an appeal to Congress for an amendment to the patent laws, so that in the future it will be impossible for any one to take out a patent upon any method of operating in the mouth, and exact a license or royalty for the privilege of using such patented methods. The following State Societies have appointed committees as reported below:

At the annual meeting of the South Dakota State Dental Society, on June 4, the following committee was appointed: H. H. Whitaker, G. H. Wooton and E. V. Marsh.

The Nebraska State Dental Society, at its annual meeting, appointed the following committee: O. M. Huestis, Nebraska City; W. H. Latey, Omaha; C. R. Teft, Lincoln.

The Texas Dental Association are in hearty accord with the movement, and a committee will be appointed later.

The Arkansas Dental Society have deputized Dr. R. Ottolengui as their representative in this matter.

At a meeting of the Kentucky State Dental Association, a committee was appointed, of which body Dr. Edward M. Kettig, Louisville, is chairman.

The following committee has been appointed by the Rhode Island Dental Society: Dr. D. F. Keefe, Providence; Dr. W. P. Church, Providence; Dr. E. P. Robinson, Newport.

The New Jersey State Dental Society announce the appointment of the following committee: G. Carleton Brown, F. C. Barlow and C. S. Stockton.

The New York State Society appointed Dr. R. Ottolengui as their committee.